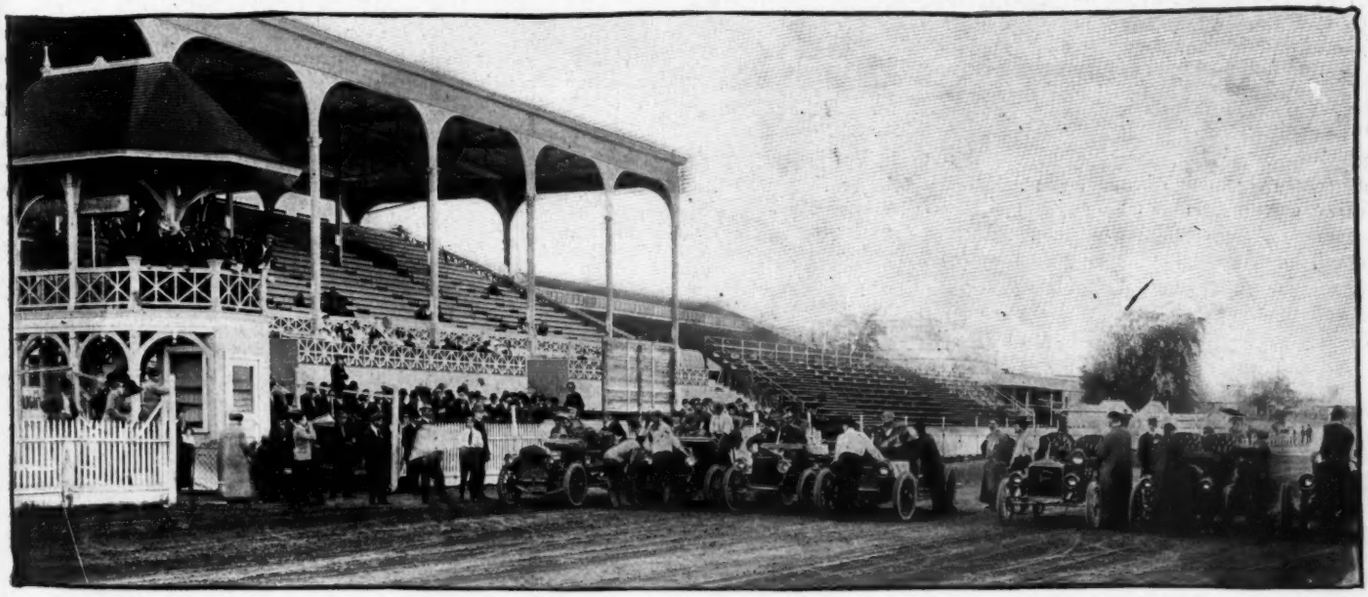
VOL. XII No. 13 CHICAGO, SEPTEMBER 26, 1907 PER YEAR $2

MOTOR AGE

LOCOMOBILE BREAKS A 24-HOUR RECORD

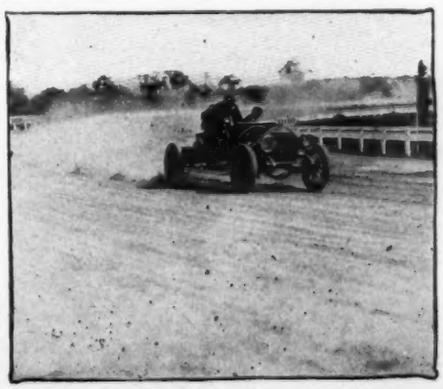


LINE-UP FOR THE START OF THE 24-HOUR RACE AT MILWAUKEE

MILWAUKEE, Wis., Sept. 22—An admirably managed 24-hour race run here Friday and Saturday of last week under the auspices of the Milwaukee Automobile Trade Association resulted in the smashing of the world's two-car 24-hour record by the Locomobile entry, two model H 30-35-horsepower 1907 cars, nominated by the Milwaukee agent. The Locomobile team put up 1,146 miles as against the previous best of 1,135 miles by the Ford at Detroit last June. Had it not been for radiator trouble it is more than probable that 1,200 miles would have been beaten, for 35 minutes were used up in putting the radiator of the relief car on the machine which was striving for the medal for making the greatest single-car mileage. At that, though, the Locomobile people were well satisfied with their showing and content with having smashed the Ford mark.

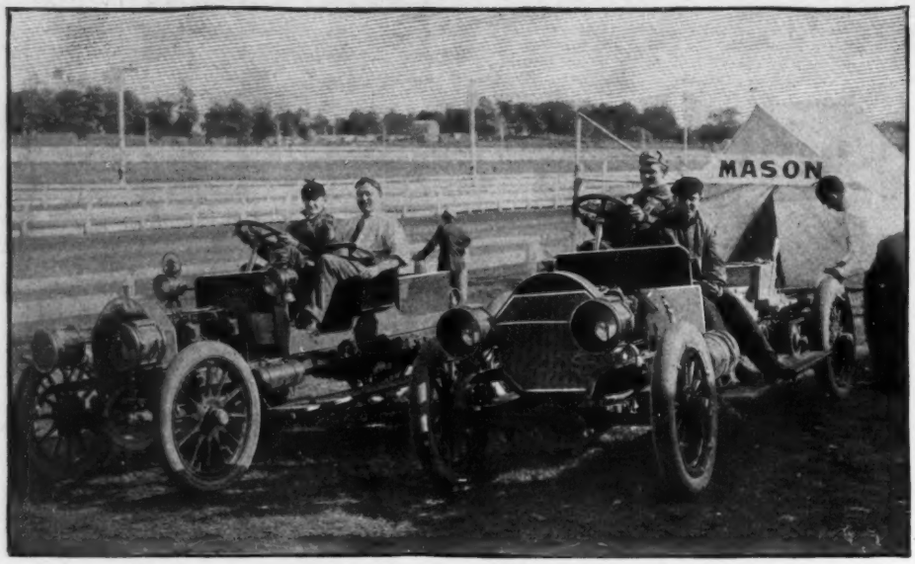
Every precaution was taken to allow no loopholes for protests and in this respect Milwaukee succeeded, for the long grind was pulled off without a kick from anyone. The scoring methods adopted were unique and the rules regarding the conduct of the contestants were strictly enforced. Street car conductors' fare registers were used for scoring, one being set aside for each car. At the completion of a mile by a car there was a merry little tinkle and an eagle-eyed official noted that the distance had been duly recorded. When the relief car was on the track its mileage was kept separate from the other and on the same register always in sight of the people in the stand.

No chance was given for anyone to steal distance when the relief car went out and flying starts were barred. When a change was made the relief car had to go to the tape and wait and the one that wanted to quit had to come to a full stop before the other was allowed to proceed. Also there was no changing of tires or replenishing of gasoline or oil on the track. All that had to be done in quarters and in this way no one could complain of being obstructed. At night the officials were careful to see that each car displayed lights and if anyone failed in this respect he was ordered off until his lights were burning. The Locomobile had to stop two or three times to light up, but no one complained, for it was apparent the rule was a fair one. Carefulness in these details resulted in a race in which there was only one accident. That came in the tenth hour, when Dusenberg in the Mason went into the fence, the driver breaking his shoulder in the mix-up.



LOCOMOBILE ROUNDING A TURN

The track was in fine shape at the start of the race, but the continuous driving resulted in wearing out the surface before the contest was finished yesterday afternoon. The turns were furrowed and cut up, but the stretches were good, and under these conditions the Loco kept things



TWO LOCOMOBILES THAT WON THE MILWAUKEE 24-HOUR RACE

humming. A. J. Banta, manager of the company's Chicago branch, was in attendance at the meet and kept his eye on the car. His experience in these matters told, for he looked after every possible emergency. The fast pace of the Loco heated up the tires near the end and Banta prevented possible trouble by pouring cold water on the air-cushions of the relief car, then sending it out while he repeated the process on the car that came off the track. Fisks were fitted on the car that went the greater distance and only nine of them were used, the last set being put on not because they were needed but because Banta did not wish to take any chances. On one set of Fisks 860 miles were covered by the Locomobile that did 960 miles of the 1,146.

Seven cars started in the race at 4:10 Friday afternoon. Only three of them, the Locomobile, the Buick and the Mitchell, the last named driven by O. C. Friend and George Browne, for the Mitchell company, were in the running at the finish. The Mitchell covered 914 miles, of which 279 miles were made by a relay car. The Locomobile won both the Plankinton and the trade cups, the former for the one car making the greatest mileage. The Locomobile's record was as follows:

Hours	Miles	Total	Time
	P. M.		
1	49	.....	5:10
2	50	99	6:10
3	49	148	7:10
4	50	198	8:10
5	48	246	9:10
6	49	295	10:10
7	48	343	11:10
	A. M.		
8	49	392	12:10
9	50	442	1:10
10	35	487	2:10
11	32	519	3:10
12	45	564	4:10
13	49	613	5:10
14	49	662	6:10
15	46	708	7:10
16	48	756	8:10
17	50	806	9:10
18	46	852	10:10
19	50	902	11:10
	P. M.		
20	49	951	12:10
21	49	1,000	1:10
22	47	1,047	2:10
23	49	1,096	3:10
24	50	1,146	4:10

The mileage made by the other contesting cars was as follows:

Mitchell—35, 75, 114, 156, 185, 217, 248, 281, 318, 353, 391, 431, 472, 516, 558, 587, 635, 674, 714, 756, 797, 835, 875, 914.

Buick—32, 74, 102, 142, 184, 217, 258, 300, 343, 376, 413, 443, 473, 510, 550, 591, 628, 664, 701, 742, 780, 804, 844, 884.

Cadillac—49, 97, 138, 182, 236, 245, 264, 289, 325, 344, 375, 407, 438, 447.

Mason—35, 70, 98, 127, 173, 214, 257, 300, 347, 383.

Jackson—28, 61, 79, 111.

Wayne—34, 52.

The Buick, driven by George L. Odenbrett and John Herber, and entered by the Bates-Odenbrett company of Milwaukee, made 884 miles without a relay during the 24 hours. The car was of the two-cylinder type and went through without mishap, Odenbrett driving 22 of the 24 hours, sleeping 2 hours.

The 24-hour race was one of the most successful ever pulled off in the west, although the attendance was not very large. The meet was a losing proposition, viewed solely from a financial standpoint, but with the exception of the Dusenberg accident not a ripple marred the affair. Officials of the meet were on hand at all times and are well satisfied with the results of the long efforts.

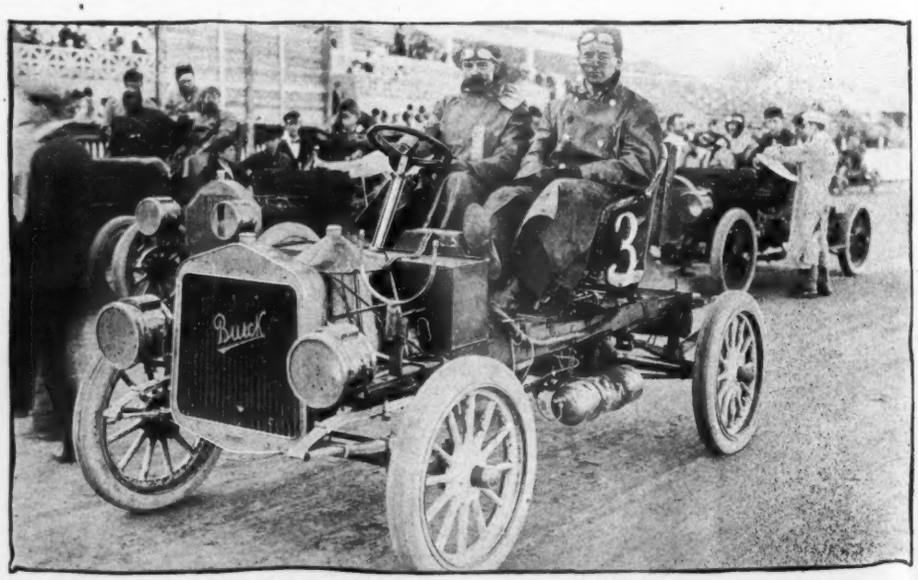
When the last mile was being reeled off the band and the crowd started a great demonstration. When Drach came flying down the last stretch, breaking the world's record, as all knew, with the Buick and Mitchell hot after him, the scene was one that made the hearts of the drivers, winner or loser, jump with joy.

The Locomobile was evidently not in danger at any time during the contest. The Mason and Cadillac put up one of the prettiest fights in the race, the former being compelled to drop out after the tenth hour, when the machine was run through a fence by the driver, George Dusenberg. The Mason which started the race was an old stock car which the company was obliged to put in as the original entrant did not arrive, owing to a steamboat wreck.

August Jonas and his Cadillac in the third hour were hampered by the fact that the fan belt gave away. The car was kept running for 12 hours more and then had to be withdrawn.

The Jackson had a little engine trouble early in the race and the Wayne broke a cylinder head. The Wayne's relay car did not get here and therefore this entry was out of it. The seventh, eighth and ninth hours saw some of the best racing. The Mason, Buick and the Cadillac came by the grand stand neck and neck each time. This was kept up until the Mason was disabled.

Sprint racing yesterday was interesting. The 10-mile handicap race was captured from scratch by August Jonas in a Peerless. The Mitchell, which had just finished the 24-hour grind, and a Buick also started. The Buick had a handicap of 1 minute and 30 seconds and the Mitchell 1 minute. The Buick was almost at the first quarter when the Mitchell started and at the three-quarter pole when the



BUICK, THE CAR THAT WENT ALL THE WAY

Buick got the word. The latter gained rapidly in a nip-and-tuck race and at the end of the fifth mile the Buick and Mitchell were having a grand time, much to the delight of the spectators. The Mitchell led the Buick until 7½ miles were finished, when the Peerless shot ahead and took a permanent hold of the lead, finishing in 11 minutes 58 seconds. The Buick by a fine burst of speed in the stretch beat the Mitchell to the finishing point, a feat appreciated by the crowd.

A match between Harroun in his own car, home-made, the Sneezer, and a 90-horsepower Tincher, driven by Allan Pirie of Chicago, was scheduled, but the Sneezer broke a cylinder in the try-out and Pirie in an exhibition turn finished in 3 minutes 32 1-5 seconds for 3 miles, with 1 minute 6 seconds for his best time for the mile. A 10-mile race between a Peerless and two Tincher cars furnished some red-hot racing. Pirie finished a length ahead in his 90-horsepower car in 11 minutes 58 seconds. The obstacle race caused much enjoyment. Four contestants were compelled to drive around fifteen barrels, scattered over a quarter of a mile on the state fair mile track. The best time, by White in a Cadillac, was 1 minute 7 2-5 seconds. Summaries of the events on Saturday:

Twenty-four hour race—Locomobile, Drach and Leiser, drivers, 1,146 miles; Mitchell, Friend and Browne, drivers, 914; Buick, Odenbrett and Herber, drivers, 884; Cadillac, W. and A. Jonas, drivers, 447; Mason, Harn and Dusenberg, drivers, 383; Jackson, Schleifer, Waldron and Spencer, drivers, 111; Wayne, Cross and Tremel, drivers, 52.

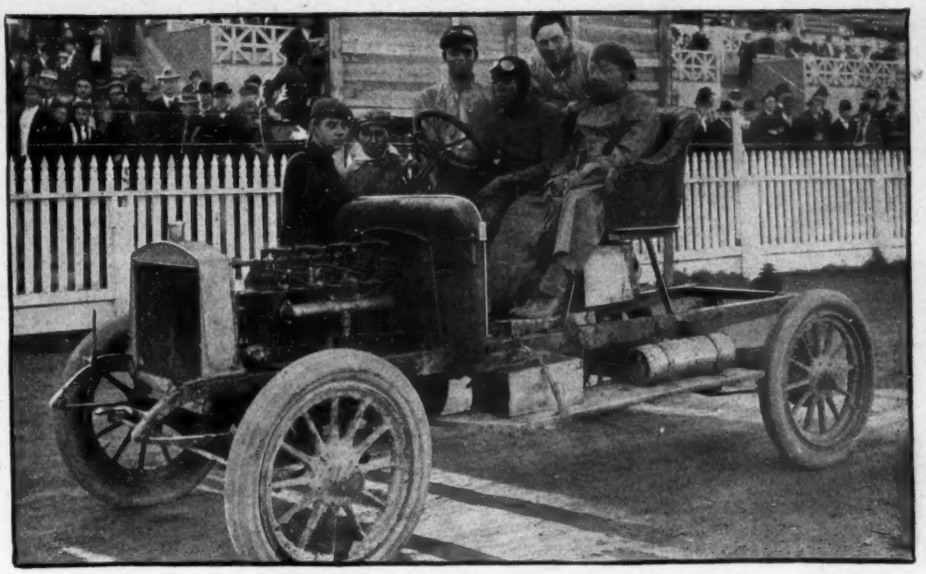
Ten-mile handicap, for the Trottman cup—August Jonas, Peerless, won; George Robinson, Buick, second; Otis Friend, Mitchell, third. Time, 11:58.

Obstacle race, Journal cup—Harry White, Cadillac, won; A. C. Brenck, Buick, second; Emil Schandein, Merkle, third; J. H. Robinson, Buick, fourth. Time, 1:07 2-5.

Special race, 10 miles—Allan H. Pirie, Tincher, won; Arbogast, Tincher, second; August Jonas, Peerless, third. Time, 11:00.

Preceding the start of the 24-hour race on Friday, there were several short-distance events which served as an appetizer for the big contest. The card opened with a 10-mile handicap event, in which August Jonas, driving a Peerless, defeated a Tincher and a Buick. This race was open to stripped runabouts, roadsters and touring cars listing at $3,000 and upwards, and only three cars came to the tape. The Tincher was on scratch, while the Peerless had 30 seconds and the Buick 90. Hardly had the Tincher got under way before the Buick was almost around the track for the first time. The Buick kept plugging along, and at the third mile Jonas, in the Peerless, had closed the gap and then settled down to trim the Tincher. The Peerless was running strong, and at 6 miles had the edge on the scratch car. At 8 miles Jonas made up his second lap on the Buick. From that point on it was nothing but Peerless, and Jonas sailed under the wire a winner, in 10 minutes 33 seconds, beating the Tincher 1½ miles and the Buick by nearly 2 miles. At times Jonas was traveling at a 1-minute clip.

The Maxwell won the 3-mile event, defeating the Earl and Brush in the order named. The first mile saw the finish of the Brush, but the Earl kept up the fight and was beaten an eighth of a mile by the Maxwell, which negotiated the distance in 6 minutes 14 3-5 seconds. Then there was to have been a 5-mile handicap for fully equipped runabouts, roadsters and touring cars listing at $2,000 and under, but it was abandoned because of the failure of some of the cars to get to the track in time. In place of it R. W. Harroun of Chicago, driving the Sneezer, a car he built himself, went after the track record of 58 seconds, made by Barney Oldfield two years ago. Harroun missed the mark by a wide margin, 1 minute 8 2-5 seconds being the best he could do. This ended the short-distance events and the cars lined up for the 24-hour race. Sprint summaries:

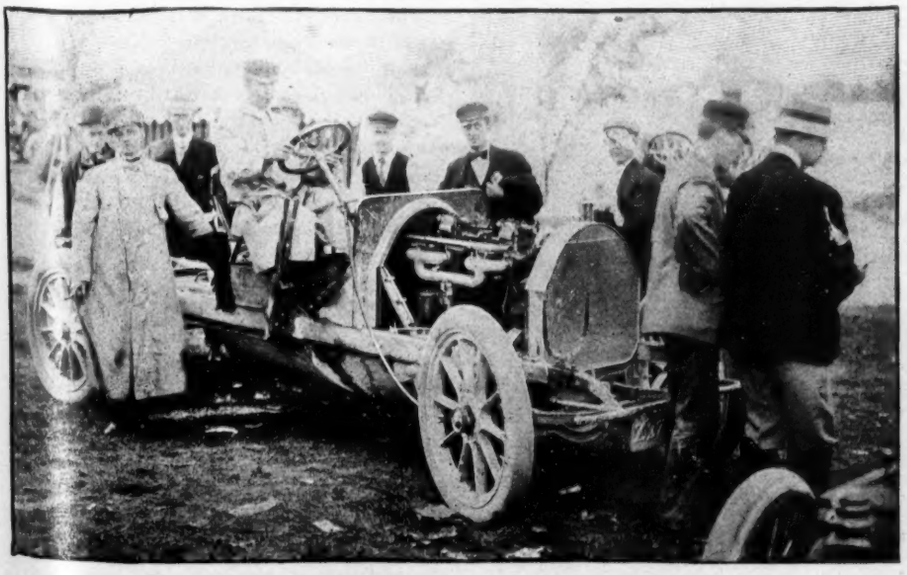


MITCHELL RUNABOUT, WHICH FINISHED SECOND

Ten-mile handicap, open to stripped runabouts, roadsters and touring cars listing at $2,000 and upwards, for the A. A. Kimball cup—August Jonas, Peerless, 30 seconds handicap, won; William Milbraith, Tincher, scratch, second; J. H. Robinson, Buick, 90 seconds, third; time, 10:33.

Three-mile handicap, open to fully equipped runabouts listing $1,000 and under, for the Hurley & Reilly cup—Edward Sanger, Maxwell, scratch, won; H. C. Waite, Earl, 30 seconds, second; R. W. Nichols, Brush, 45 seconds, did not finish; time 6:14 3-5.

Milwaukee did not awaken to the fact that great motoring stunts were accomplished in the meet until to-day, and now the entire town is wildly enthusiastic, and those who went to see the races are congratulating themselves over the fact that they were among those present. Another meet here would pay, and it is more than probable that the Milwaukee dealers will attempt something of the sort before snow flies. But even if they do not they can rest content on their laurels after a very busy summer. The trade awoke last spring to the possibilities of securing gilt-edged advertising by hustling a bit. A dealers' association was formed and hardly had the organization been completed befort a reliability run was promoted and carried through successfully. Then came a hill-climb, which made a tremendous hit and which brought out thousands of people. Flushed with these successes, a race meet just finished was planned, the



JACKSON CAR, ONE OF THE 24-HOUR CONTESTANTS

MOTORIZING THE TRI-COLOR ARMY

De Dion-Bouton, Mors, Berliet and Other Vehicles in French Army Demonstrations

IMPETUOUS, vivacious, enterprising, ambitious France has just emerged from its annual 2 weeks' military demonstration in which 1,000,000 men were in the field under arms laboring for a fortnight to perfect the military tactics of the tri-color army and incidentally testing anew the merits and feasibility of motor cars in the field. For several years the war department has appointed its chief engineers to follow the performance of motor vehicles during their tests conducted by the Automobile Club of France and other motoring organizations and invariably after these tests the minister of war awarded a certain bounty to the cars showing the best regularity and reliability and not infrequently long orders for duplicates of the successful cars reached their makers from the heads of the war department. The recent demonstration was, however, the first in which military motor cars figured so prominently, for before the opening of the trials the war department purchased outright a dozen of the best industrial cars in addition to those retained after the recent commercial tests conducted by the Automobile Club of France. In the present demonstration these vehicles together with thirty other vehicles, of one make or another, loaned by their makers to the army were in daily use. Every day the cars conveyed stores of food, water, provender, coal and the many other eatables and necessities of an army in the field. Thanks to the splendid roads of France it was possible throughout the 2 weeks for the cars to make excellent time and demonstrate their regularity so that at the conclusion of the test the army authorities were more than jubilant over the outcome of the maneuvers. To show the confidence the army engineers had in the stability and trustworthy qualities of the motor wagon it is but necessary to mention that previous to the start of the demonstrations the head engineer discarded 150 horse-drawn service carts and allowed the forty or more motor wagons to not only take their place but do additional work instead. During the 2 weeks the work of the cars was not always over the boulevard roads of the south and center of France but often regimental orders compelled the gasoline and steam cars to cross prairie lands, fields, hilly districts and in short do whatever the army had been accustomed to having horse-drawn wagons do in the zone of hostilities and on the march.

Unloading a Berliet at a Noon Camp

Needless to say the tires used were mostly solid rubber bands, but here and there a steel tire was seen. The service was carried out under military law, severe and hard, so as to get actual war service conditions to bear on the cars. It says something, too, for the prosperous state of several of the leading French makers of industrial cars when it was seen that some of them were unable to lend a car for the service, even of the state, in view of the happy condition of their order books and the congested state of their works, each car being seized by a long-suffering client the moment it finished its shop tests. The conditions which these lorries fulfilled were even more severe than carefully-chosen tests organized by the French club, for the roads were not chosen in advance and any sort of ground was broken on any day and in any weather. In spite of limitations to the speeds on the finest of roads, limitations which were included in the military law and the exacted performances on hills and bad roads, several of the cars made daily runs of 130 to 150 miles per day and a de Dion lorry covered 280 kilometers, or 175 miles, between daybreak and sunset on September 11. The steam car was represented in the trials and came out well. Darracq-Serpollet and Purrey were its advocates. The majority of the cars, however, had gasoline motors. Nothing could bring out to more advantage the best points of these industrial cars than the service which they underwent, and the constructors will reap a wonderful fund of experience which will serve them well in constructing cars for the next or any succeeding French show. In addition to the industrial cars, be it

THREE PURREY STEAM CARS LOADED WITH PROVENDER AND OPERATING IN MILITARY DEMONSTRATION

noted, there were some hundred or more private cars, belonging to the officers, pressed momentarily into the service affecting the great autumn maneuvers.

The comprehensive scope of the maneuvers can be realized when it is remembered that the army divisions were scattered over different parts of the country and that the motor vehicles had to cover many miles in short periods in order to have provisions for the men and horses at the noon or night stops on time. First of all, there was the army in the southeast of France, which included in its park of cars a number of Renard road trains, several steam Purrey cars, such as are used daily in Paris to transport each 10 tons of excavations from the tube railway being bored at present. Some light touring cars followed the maneuvers at close range, over fifty motor cycles carried dispatches and tri-cars carried voluminous regimental papers from place to place. Each of the heavy-weight trucks was calculated to take the place of six regimental wagons of two horses, and well they accomplished the task. On the southwest side of France the defending army was also liberally supplied with touring cars, heavy-weight trucks and motor cycles and everyone was delighted with the service these mechanical toys, as the military men termed them, rendered. As regards troubles, well, there were undoubtedly some, but mostly among the touring cars, which, to do them justice, had to cover all sorts of broken ground which the weight of the industrial cars forbade them to attempt. Only two of the industrial vehicles out of the forty affected to the service of this mobile army were thrown hors de combat by reason of mechanical defects, none of these being attributable to the engine or tires properly speaking.

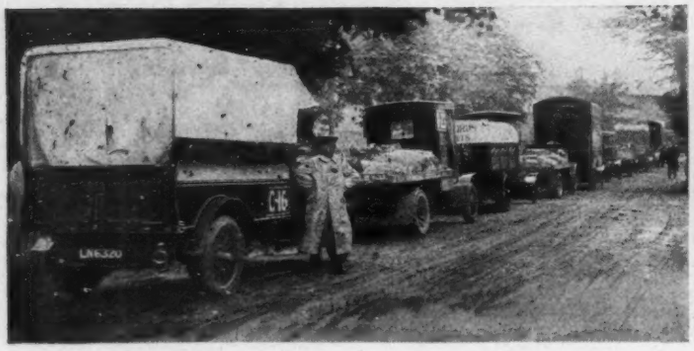
The list of trucks or lorries donated to the demonstrations by their makers was as follows: De Dion-Bouton, two trucks, one 30 horsepower, the other 40; one 30-horsepower Empress, one 24-horsepower Mors, one 24-horsepower Panhard, one 40-horsepower Darracq-Serpollet steam wagon, one 10-horsepower Peugeot, two Cohendets of 30 and 40 horsepower, two Gobron-Brillies of 24 and 45 horsepower, both using naphthaline instead of gasoline as fuel; two Lorraine-de Dietrichs of 20 and 40 horsepower, the latter a six-wheel vehicle, one of the first of its class, and which made a remarkable showing throughout the demonstrations, and one each of Turgan, Aries, Poney, Pantz, Berliet, Commerciales, Delaugere and U. D. P. X. Of this list eight used chain drives for final transmission to the rear wheels and six used cardanshafts, the exponents of this drive being de Dion-Bouton, Gobron-Brillie, U. D. P. X. and Commerciales. Eight had their wheels shod with iron tires of the plain heavy band type, these being the Cohendets, Poneys, one of the Brillies and the Empress. Of the remainder all but a couple of the very light-weights used solid rubber tires. Every car was fitted with a magneto for ignition, there being four cars fitted with low-tension make-and-break parts, namely, Berliet, Lorraine-Dietrich and Mors heavy truck.

The demonstrating cars owned by the war department and which went through the 2 weeks with honorable mention were: 30-horsepower de Dion-Bouton, 28-horsepower Mors, 30-horsepower Turgan, 25-horsepower Darracq-Serpollet and a Gillet-Forest and a Turgan. All of these with the exception of the de Dion-Bouton had chain drive, all the gasoline vehicles had four cylinder motors, all used rubber tires and the gasoline motors had magneto ignition.

Naturally throughout the tests the iron tires were watched with particular interest and the engineers were most favorably impressed with the speed the vehicles fitted wtih these tires made. What helped them to make so excellent a record was their good spring suspension and the general use of shock absorbers. Not the least imposing vehicle with these iron tires was the Berliet lorry, which throughout the fortnight came in for a big share of praise from the army officials.

SIX-WHEEL LORRAINE-DIETRICH IN FRENCH TEST

BRITISH COMMERCIAL TESTS PROVE SUCCESS



CARS LOADED READY FOR THE START

LINE-UP WAITING TO CHECK IN AT NIGHT

THE commercial vehicle tests at present being conducted over the rural roads of England by the Royal Automobile Club are progressing merrily and the prospects are that at the end of them on October 12 there will be several vehicles credited with perfect scores. The official entry list of sixty was reduced to fifty-six due to the failure of the two Fiat cars to enter under their proper load qualifications, and to the wrecking of one vehicle on a night run to the starting point, and to the failure of a fourth manufacturer to put a quantity of oil in his differential gears to care for one of the pinionshafts and which resulted in the destruction of the bearing carrying this shaft. Of these fifty-six, thirty-one made a non-stop run of the first day's performance, while many of the others had short stops such as 1 minute, 4 minutes, 10 minutes, the longest recorded stop being 30 minutes. The majority of these stops were made for troubles other than those connected with the motor or gearset. A few makers found their brake adjustment insufficient for the hills and had to waste a minute or 2 changing the tension of the bands. Three or four of the machines were underpowered for the work and it was an interesting sight to see a truck get stuck on the middle of a steep ascent, dump half of its load off, run to the top with the remainder and after unloading it on the side of the road go down the hill and bring up the remainder. Another vehicle which found it impossible to make the hill on the low forward speed made a unique and slow ascent by using the reverse and going up backward.

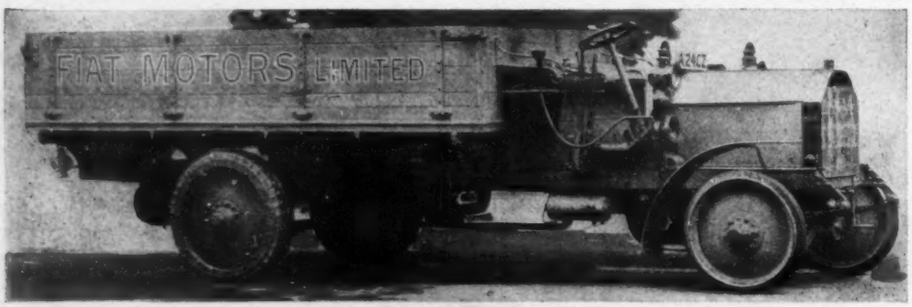
In starting the machines off on their 22-day run together with 8 days spent in exhibitions the heavy steam cars were first dispatched, followed by the largest load-carrying gasoline machines and finishing off with the light-load gasoline vehicles. The rules called for a different route for each class of vehicles so that although all of them started from the same point in the morning and reached the same station at night, the vehicles of each class made the run over a route of its own and so every road on the country round was used by the different classes. This arrangement which will rule until the completion of the test worked excellently the first day as it avoided congestion on the roads and introduced the vehicles to practically six times as many towns as they would have entered had all of the contestants followed the same route from morning until night.

On the first day's run the steam tractors made a good showing, two of the three not having to stop for water. They averaged 5 gallons of water consumption to the mile. In the gasoline classes it was discovered that the 3-ton machines averaged 7 miles to the gallon, although in one or two instances as high as 12 miles to the gallon was made.

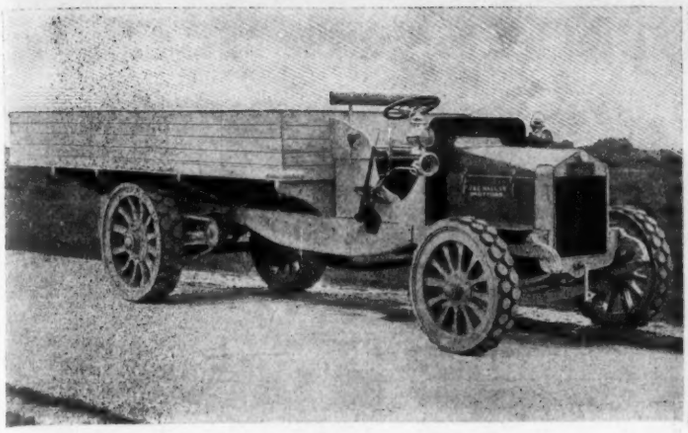
A maximum period of 1 hour each day is allowed for replenishing lubricating oil, gasoline, water and the adjusting and repairing of parts and in case of steam cars for getting up steam. All additional time consumed is entered by the observer on his official score card and counts against the performance of the car. No important repairs can be effected in a depot or parking space unless under the watchfulness of a club official. A varying period is allowed for washing the machines, according to the condition of the roads and the conveniences of the parking space, the length of time being announced each day. The official running times of each day vary according to the length of the run and the nature of the roads, but the start is never made before 7 a. m. and the finish is invariably placed before 5 p. m. Noonday luncheon may be taken at any place along the route, the selection being in the hands of the observer and the time occupied is taken out of the running time of the car.

It was on the second day of the run that many of the vehicles experienced hill-climbing troubles, the Turgan and de Dion having to dump half of their loads off on the middle of a steep ascent and make a second trip and on this ascent the Broom & Wade wagon went up backward. The smaller vehicles made all of the ascents in fine form. During this run twenty-seven of the fifty-six machines made non-stop runs according to the official returns and many of those credited with stops of 2 or 3 minutes have practically made non-stop performances as this time was lost not because of troubles with the car but due to road conditions. The second day's run showed a few minor weaknesses, two or three of the vehicles having developed leaky radiators that caused frequent delays for taking on water. In the light vehicle class of the six entrants three made non-stop runs; in the next class but one-third of the cars made perfect performance, but in the fourth or big gasoline car class but 1 minute was lost by the twenty competing cars, a fact which shows the reliability of the big vehicles.

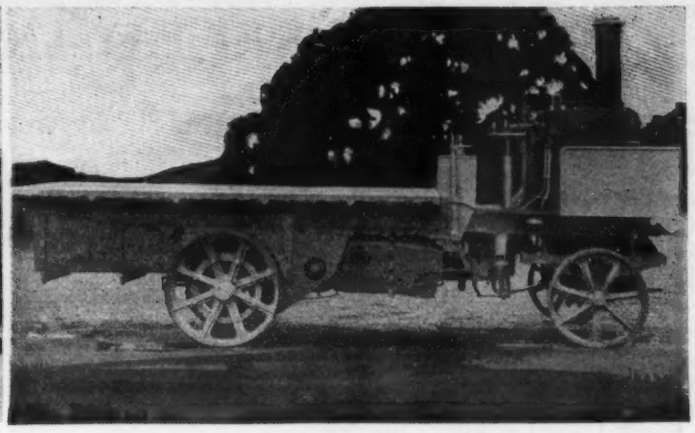
The third day's run was an uneventful affair in that nearly all of the cars covered the course within the schedule and few of them had stops for other than ignition troubles. In this run twenty-five of the fifty-six made perfect non-stop runs, in which number were all of the steam tractors which although heavy, slow-moving machines are showing phenomenal regularity. The story of the remaining nineteen trips will reveal many little troubles in the fifty-six competitors. The judges and observers did not look for serious troubles on the opening days, but look for defects to appear after half of the run has



FIAT 5-TON WAGON WITH DISK WHEELS



DISK TIRES ON THE 5-TON HALLFORD



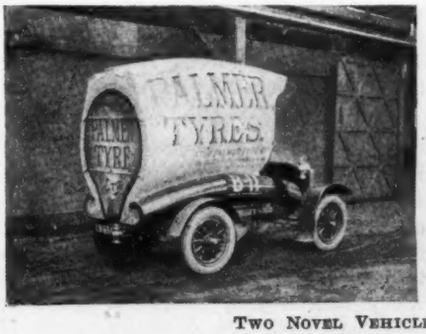
ST. PANCRAS STEAM WAGON

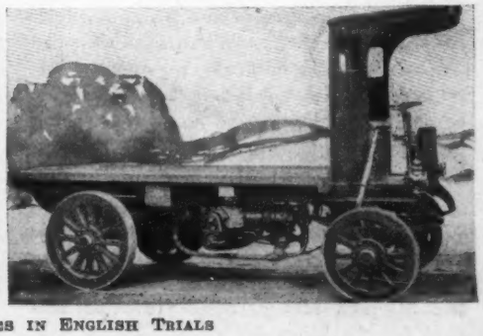
been completed and at which time the stress of steady running with heavy loads will begin to tell upon the cars.

It may be of interest to American builders to know the wheelbase of the different vehicles in the several classes and the length of which follows: In class A, for ½-ton machines, it varies from 7 feet 3 inches to 8 feet 9 inches; in class B, for 1-ton machines, the range is from 7 feet 6 inches to 10 feet, there being two of the latter length; in class C there are two 9 feet 9 inches and two 11 feet 7¾ inches, with the remainder ranging between these extremes; in class D the minimum is 11 feet 6 inches, the maximum 13 feet 4½ inches; in class E the wheelbases run all the way from 10 feet 6 inches to 15 feet 3 inches, but the majority in this class measure between 12 and 14 feet; in class F 10 and 14 feet are the maximum and minimum; and in class H, for steam tractors, the length drops to an average of 7 feet 11 inches. Artillery wood wheels are used on all but twelve machines and on these are steel disk or spoke wheels with but one example of the cast steel wheel. The wheel diameters on the small class are from 28 to 32 inches; on the second class 32 to 34 inches; on class C, 34 inches; class D, 34, 36, 39 and 40 inches; class E, 35 to 42 inches; class F, 39 to 42 inches, and on class H, the steam tractors, 54 to 60 inches.

Interesting further is the size of the carrying platforms on the several vehicles and additional interest crops up when these carrying spaces are compared with the length of the wheelbases. In class A, the 1,000-pound machines, the platforms are as follows: 7 feet long, 3 feet 6 inches wide; 4 feet 9 inches long, 2 feet wide; 8 feet 3 inches long, and 3 feet 6 inches wide; 6 feet long by 3 feet 4 inches wide; and 7 feet 4 inches long by 2 feet 6 inches wide. In the 1-ton machines some of the load platforms are: 6 by 4 feet, 7 by 5 feet, 8¼ by 4½ feet, 8 by 4 feet and 8 by 4½ feet. In the 1½-ton machines the platforms are: 10 by 5½ feet, 9 by 5 feet, 8 by 4½ feet, and 8½ by 5½ feet. The 2-ton machines show bigger spaces as follows: 10½ by 5½ feet, 11 by 5 feet, 11½ by 6½ feet, 10 by 6 feet, and 13 by 6 feet. In the 3-ton machines some of the load spaces are: 14 feet by 6½ feet, 12 by 6 feet, 13 by 4⅓ feet, 10 by 6 feet, 12 by 6½ feet, and other corresponding sizes. In the 5-ton machines the sizes are larger and range as follows: 12 feet by 7 feet, 13 by 6 feet, 11 by 7 feet, and 13 by 7½ feet. On the class H cars which pull trailers the trailer platforms measure: 10 feet by 7 feet, 11 by 6 feet, and 12 by 6 feet. It might be noted that from these figures the tendency in large machines is not to lengthen the wheelbase and have a big body overhang over the rear axle, but rather to make the load-carrying platform wider and shorter, not making the length any greater than in many of the light load machines.

The great problem to be settled by the present trials and the goal that the Royal Automobile Club has kept constantly before it in framing the rules governing the competition is the average reliability of the contesting cars. In previous tests makers found it possible to easily get vehicles to endure a 7-day run by tuning them up before the start of the trials and nursing them during every mile and minute of the test. The present test, extending, as it does, over a month, was designed to test accurately the enduring qualities of the machines, and also while testing these qualities to have the cars doing the same class of work as when placed in the hands of an owner. In previous tests the loads carried have frequently been dead weight, such as sand or rocks, but in these tests the loads are of merchandise, such as the wagon was designed to carry. Some of the vans intended for the furniture trade are actively engaged in hauling furniture. This adapting the load to the service for which the vehicle was intended is one of the novel and commendable features of the tests. Not only do loads of this nature do justice to the vehicles, but they arouse greater interest along the route, and unquestionably provide better advertisement for the machines. Another point not to be overlooked in these tests is that the pace is a reasonable one and that racing to see who will be first at the night stop is prohibited. The pace set corresponds favorably with the average speed a commercial car is intended to operate at, and not a race from start to finish. Yet another valued consideration is that the drivers are given 1 hour a day for replenishing fuel and overlooking the cars. This is reasonable, and the time could well be extended 50 per cent; for what wagon owner would not want his driver to spend at least 1½ hours each day overhauling and examining his car? In a proper commercial test, the car treatment should be the same as the car receives in the hands of a careful operator. Tests are not designed to break up the best machine in a week or ten days, for were that the aim a wrecking competition might be substituted, in which the tensile strength of the many parts of the car alone would be tested. A rational test is one in which the load element, distance, variable road surface, speed, braking efficiency, simplicity of control and fuel economy figure. In America fuel economy is largely a negligible quantity in that gasoline costs but 12 cents a gallon, but in London, where it wholesales at 35 cents, and in Paris, where it cannot be purchased at less than 50 cents, it is a factor.





TWO NOVEL VEHICLES IN ENGLISH TRIALS

RECORD SPEED IN PROVENCE MEET

VIEW OF START OF THE CONTESTS

BABLOT IN THE RECORD-BREAKING BRASIER

PARIS, Sept. 14.—The Provence meet proved a greater success than ever this year, due, perhaps, to the presence of a large number of cars which were stopped on their way back to Paris after the popular Brescia race in Italy. The classical route between Salon and Arles never presented more animation and the glorious weather added a completing note to the scene. More than forty cars were entered and the kilometer and 5-kilometer records were in great danger throughout the day. The cars entered were examined and weighed on the 11th, and on the 12th the trials were held. The ball opened with pure speed trials in which some of the grand prix cars and beaten competitors from the Brescia circuit took part. Bablot's Brasier—the one which overturned in the grand prix in avoiding Richez's car—was the first to prove its worth by doing the flying kilometer in 23 4-5 seconds. Rougier in the grand prix Lorraine-Dietrich did the distance in 26 1-5 seconds and Haeuslin in a Rochet-Schneider did 6 seconds slower. The Lorraine-Dietrich cars evidently were under-geared, but the Brasier was in form. The speed of the winner amounted to 94 miles per hour, which is fast even over a flat bit of road.

The tests of motor cycles and three-wheelers did not arouse much enthusiasm. Motor cycles are best raced on tracks, it is thought, while three-wheelers should not race at all. The touring car events awakened keen interest. In the event for small cars of one, two or four cylinders, with a weight not exceeding 1,100 pounds in running order, the Sizaire and Naudin single-cylinder cars came in victorious. Sizaire drove one and Naudin another and the latter finished within 3-5th of a second of his partner, the time of the winner being 51 1-5 seconds for the flying kilometer. A Prima car was third in 55 seconds and a Demeester car covered the ground in 60 3-5 seconds. In a subdivision of this class was a Peugeot, driven by Guippione, with a single cylinder of 3¾-inch bore and 5½-inch stroke, which took 52 seconds for the kilometer.

In class 2, including cars up to 1,540 pounds in weight, and two cylinders under 4¾-inch bore or four cylinders under 3¼-inch bore, a Motobloc car came in first in 57 seconds. Second place also fell to a car of the same make. In the third class of four-cylinder cars, cylinder bore below 3 3-5 inches and weight in running order below 1,750 pounds, a Werner car, driven by Madame Herveu was first in 46 4-5 seconds. This class was nominally for 12-18-horsepower cars. In the class of 18-24-horsepower cars, weight below 2,100 pounds, and cylinder bore below 4 inches, Mottard in a Buire car made a good speed of 52 miles per hour, covering the kilometer in 42 4-5 seconds.

Times became faster as the size and power of the competing cars increased. In the 24-30-horsepower class, weight 2,600 pounds and under, an Itala made the same time as a Buire car, both arriving in 39 4-5 seconds, an average speed of 57 miles per hour. A Rolland-Pilain car in the 30-40-horsepower class covered the ground in 34 seconds. A Radia car in the 40-60-horsepower class cut down this time to 32 seconds and a six-cylinder Aquila-Italiana car did the distance in 35 seconds. All the preceding were for the flying kilometer. Several other cars came close to the above figures.

The 5-kilometer trials also were interesting. The grand prix cars were set at the records first and Bablot's Brasier succeeded in making a world's record of 1 minute 56 4-5 seconds for this distance. The preceding record was made by Colomb, who, in a Mors car, covered the distance in 2 minutes 1-5 second. Rougier's under-geared Lorraine-Dietrich followed the Brasier in 2 minutes 4 seconds.

Sizaire and Naudin's single-cylinder cars were fastest in the first class for touring cars in the flying 5 kilometers, doing the distance in 4 minutes 6 4-5 seconds and 4 minutes 23 1-5 seconds, respectively, followed by a Prima, 7 seconds slower than the car of Naudin. Guippione's Peugeot, which is a single-cylinder car with 4¾-inch bore and 5½-inch stroke, made the good time of 4 minutes 6 2-5 seconds. None of the second category cars gave better results than this, but Mme. Herveu in the third class of cars brought a Werner home at 51 miles per hour, covering the 5 kilometers in 3 minutes 41 seconds. This was the best of the third or fourth classes, but the fifth class, for 24-30 horsepower cars, showed the speed of the Buire car, driven by Kist, which did the stunt in 3 minutes 17 seconds, followed by another Buire car 10 seconds slower. Eleven seconds slower was a Brasier and an Itala and two Mors cars also finished under 4 minutes 30 seconds for the distance.

The sixth class included 30-40-horsepower cars, and a Rolland-Pilain car covered the 5 kilometers in 2 minutes 49 seconds. A Mors, driven by Madame Hamel came flying home in 3 minutes 40 seconds. The contest for 40-60-horsepower cars of the seventh class resulted in a victory for La Buire cars in 2 minutes 35 seconds. A Radia did 2 minutes 39 seconds. The six-cylinder Aquila-Italiana covered the well-beaten track to end the meeting in 3 minutes 34 seconds.

ITALY MAKES 1908 PLANS

Turin, Sept. 11—France has decided on its plans for the 1908 grand prix and now Italy has followed suit, deciding that it will follow the decisions of the international Ostend conference and organize a great speed contest in 1908 in accordance with the rules adopted then, using the formula then proposed and since accepted by France for the grand prix. Italy, however, will only recognize those trials, contests and races for touring cars which are set down on the international calendar, which is being drawn up now, in order to prevent useless efforts on the part of Italian makers. In case no unified code is presented by international effort as regards events for touring cars, then Italy will itself drawn one up. In addition, in view of the fact that foreign-made cars have been racing under the name and colors of their filial companies in Italy and elsewhere, it has been suggested that the

following clause be included in all motor car events: "That the place of origin of the car be declared and the name of the actual maker of the car." Moreover, Italy will recognize only races held over a distance of at least 15 miles and only events the dates of which have been decided within the first 3 months of 1908. This is done in order to prevent the useless multiplication of small events.

TALK ON BALL BEARINGS

Hartford, Conn., Sept. 24—At the meeting of the mechanical branch of the Association of Licensed Automobile Manufacturers, held yesterday, the ball-bearing equipped motor car was the subject of an elaborate discussion. For some time the engineers of the association have been experimenting with the new methods and theories for the construction of cars to give greater motor efficiency than heretofore. A carefully prepared paper on the subject was read by Frank Stearns, of the F. B. Stearns Co. Papers on the same subject were read by E. T. Birdsall, of the Selden Motor Vehicle Co., and E. R. Hewitt. At the afternoon session there was a report of the tire committee, the subject being a two-part or detachable rim. The report of the test committee of the engine tests which have been made on a Thomas Detroit motor at the laboratory of the association proved of great interest. It was clearly shown that considerable depreciation in power of a motor was caused by the friction of the piston rings, and suggestions were made for the elimination of this. The recommendation of the test committee, which held a meeting in Hartford last week, for a series of elaborate alcohol tests, was approved and it is expected that these experiments will begin very soon.

GLIDDEN LEAVES ENGLAND

London, Sept. 14—The British have just parted with the Glidden touring party, which is bent on completing a 50,000-mile journey before laying up for alterations and repairs. Charles J. Glidden looks today fairly much as he looked in 1903, when the writer saw him in the Phoenix park, Dublin, at the wind up of the Bennett race in Ireland, which goes to show that motoring around the world for an occupation is not a bad substitute for the elixir of life. S. F. Edge entertained Glidden at a complimentary luncheon prior to his departure and Mr. Glidden gave the company a 10-minute lightning sketch of what he had done. To date Mr. Glidden has covered 42,367 miles in thirty-five countries. He has motored 337 days, twice encircling the globe, crossed the Arctic circle in Sweden and reached the most southerly road in the world in New Zealand. As Mr. Edge pointed out, the Glidden tour is a tour in a motor car, not with one. The Napier car has been driven every mile registered on its own wheels by its own power.

BEATS CENTURY MARK

Packard Defeats Mercedes in Match at Philadelphia, Doing 100 Miles in 1:57:26 3-5

Philadelphia, Pa., Sept. 23—When at the meet of the Quaker City Motor Club at Point Breeze, on September 14, the 30-horsepower Packard, driven by Joseph Parkin, Jr., won out in the 100-mile race, the owners of the runner-up, Dalley & Schill, believing that their 60-horsepower Mercedes, had received a cold deal from Dame Fortune, asked for a special match race between the two cars. In the first race the Mercedes had led till the eighty-ninth mile, when, owing to a combination of bad gasoline and carbureter troubles, Driver McDuffee was compelled to not only resign his more than a mile lead, but to allow the Packard to get 5 miles ahead of him before he could get going again. It was then too late to do anything more than stave off Dan Webster's Frayer-Miller, which was endeavoring to collar the place honors.

When the subject of a second race was broached Thomas Wilkinson, owner of the Packard, and a game sportsman, instantly accepted and suggested that to make things interesting each side hang up $5,000. That was a trifle too steep for Dalley & Schill and a compromise was effected on $500 a side, the entire amount to go to the winning driver. Saturday, the 21st, was agreed on as the date and Point Breeze as the place. The time of the winner in the first race, 2 hours, 2 minutes and 26 4-5 seconds, was said to be the American record for stock cars on a circular track and it was believed that new figures could be established if conditions were favorable. In Saturday's race the Packard cut the record to 1 hour 57 minutes and 26 3-5 seconds. There were no admission charges at the gate and about 3,500 people were present to witness the struggle. The Mercedes owners were taking no chances and to insure a win Mr. Schill decided to drive himself, with another German, Max Binder, as his mechanic. The Parkins, father and son, handled the Packard, the youngster at the wheel. The cars got off to a good start, the Mercedes in the lead. At the end of the first mile, which was covered in 1 minute and 15 4-5 seconds, the big German was ahead by 100 yards. Inch by inch and foot by foot the Mercedes gained ground, until at the 25-mile mark the Packard was just half a mile behind. When the German car flashed under the wire for the thirty-eighth mile the Parkins were at the quarter pole, and exactly three-fourths of a mile to the bad. The prospects seemed good for a lapping of the Packard when on the forty-second mile, with both cars on the stretch, the Mercedes was seen to pull up at the infield entrance and Schill beckoned for help. The Mercedes' mechanical force was on the spot in a jiffy, so were half the spectators, and with the Packard coming at a 50-mile gait it looked like bloodshed for a few moments, but young Parkin, by a quick swerve to the outer rail, missed a bunch of hare-brained youths, who were hurrying to see what was the matter.

It was found that the keys holding the flywheel in place had worn loose and as repairs could not be completed under half an hour Owner Schill gave up the race. Under the agreement everything counted and the Packard was compelled to finish the hundred before the stakes could be claimed. When the breakdown occurred the Mercedes was nearly 3 minutes better than the previous Saturday's time and the Parkins determined to get under 2 hours if possible. All went well until just after the completion of the ninety-seventh mile, when rounding the first turn beyond the grand stand, the right rear tire came off and it was by the veriest hair that young Parkins prevented an overturn. As it was he was compelled to slow down materially and, not daring to stop, the Packard limped around the track for the 3 remaining miles and crossed the tape amid the cheers of the crowd in 1 hour 57 minutes and 26 2-5 seconds—just 5 minutes and 1-5 of a second faster than last Saturday's win. For the purposes of comparison the time in both races at the completion of each 10 miles is appended:

Miles	Time Sept. 14		Time Sept. 21
10...	12:42 2-5	Mercedes	11:39 3-5
20...	25:06 2-5	Mercedes	23:19 1-5
30...	37:16 1-5	Mercedes	35:05
40...	49:42 3-5	Mercedes	46:51 2-5
50...1	:01:54	Packard	58:41 2-5
60...1	:13:54 4-5	Packard 1	:10:27 1-5
70...1	:25:57 3-5	Packard 1	:22:24
80...1	:37:54	Packard 1	:34:14 3-5
90...1	:49:50 4-5	Packard 1	:45:53 1-5
100...2	:02:26 4-5	Packard 1	:57:26 3-5

In the race of September 14 the Oldsmobile led at 10 miles, the Packard at 20, 30 and 40, the Mercedes at 50, 60, 70 and 80 and the Packard at 90 and 100.

SLIM CHANCE ABROAD

London, Sept. 14—Some little excitement has been created in English trade circles by the news cabled across from New York that a large shipment of American motor cars—said to number 2,000—is being prepared for the European market to be sold at auction here. As the said European market is just a trifle sick at the moment a dump of this sort is not calculated to increase the gaiety of the natives. Neither is it likely to increase the exchequer of the dumpers, for auction sales prices, even in the highest grade motor goods, do not nearly approach manufacturing cost. A forced sale of seventeen Binachi cars the other day realized $600 each, their chassis price on the market being $2,600. Second-hand cars, too, go for an old song, especially if their horsepower is over 20. Those who want to make money out of the English motor car market had better spend a few months in preliminary examination before they fling their dollars away.

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CREDIT TO AMERICANS

EUROPEAN manufacturers of motor cars admit that American machinery is responsible for the good work that is turned out in their factories, and that it has been largely responsible for the gigantic strides that have been made in the manufacture of cars during the past few years. In an interview with Count de Dion, it is learned that practically all of the machine tools that are used in most of the French factories are of American make, although now the machine tool makers of France and Germany are beginning to find something of a market at home. Any gain the foreign cars may have made on American cars in the past may, then, be laid to an earlier beginning, and, consequently, a greater amount of experience in motor car construction. Foreign makers for years had the benefit of securing better material than American makers, but while this was true it is not now true, and at no distant date the foreign makers will be found using American material, just as they now use American machine tools. Count de Dion has admitted that but for the use of American machine tools the industry would not be where it is to-day and that the foreign car would either have been more crude than it is or more expenisve. Thus, then, can American ingenuity claim credit for boosting the motor car industry, although it did so in a roundabout way.

FEAR THE YANKEES

LONDON is aroused over the report that American makers of motor cars are about to dump a couple of thousand machines on the British market and auction them off. In all probability the story is but a wild rumor, for there are not 2,000 machines unsold in this country this year. No American maker would appear to be so foolish as to believe any such move could prove at all profitable, particularly in view of other attempts to dispose of cars by means of the auction route. It is shown that at a forced sale seventeen Bianchi cars brought only $600 each, whereas the market price for each chassis alone was $2,600. It is useless to attempt to flood a market that already has all it can do to live under the pounding it receives from its home and continental seekers for business; it would be a far wiser move to turn attention to countries that are after good machines and have been after them for some years. Motor Age has before shown that there are markets in South America, Africa, Australia and the orient for any American maker who has not been able to dispose of his output at home. But it has also shown that a few unscrupulous makers have been the cause for frightening these foreigners and making them chary about touching anything American in the motor car line. All this came about because some unreliable trash has been spread on the market in years past. Were the American makers to make something of a combined effort to show the people of the countries named that they have the right kind of goods, that the prices are consistent and that only square business methods prevail, there would be no need for auction sales, for there would be all the market necessary to take care of the surplus, if any exists. It is a matter that sooner or later must be considered seriously and one that will be considered before another year has passed into the history of the motor car.

ACTION AT LAST

MOTOR CAR racing on comparatively small tracks bids fair to hear its death warrant read, for the American Automobile Association has come to the conclusion that, after all, such sport is decidedly dangerous not only to competitors but to the public. Motor Age has continually pointed out to the American Automobile Association these dangers, it has recorded the havoc that monster cars have played with life, it has shown fatalities at most of the more important meets of the country. It has printed the news because it was news and not because it believed in or desired to support such dangerous play. Now the American Automobile Association has come to the conclusion reached by Motor Age long ago—that motor car racing on mile tracks is too dangerous to be continued and has appointed a committee representing the various motoring organizations of the country with a view of ascertaining the opinions of these bodies relative to the discontinuance of the granting of sanctions for meets to be held on such small and usually ill-constructed tracks. There ought to be but one opinion voiced by this committee—there can hardly be any other. But if this committee shall deem it wise to render a report favoring the continuance of racing on small tracks and the American Automobile Association feels compelled to be guided by the report of the committee, then each time a fatality occurs those responsible for the report and its adoption may sit down and ponder over and feel morally responsible for the result. Should the American Automobile Association find itself in a position to refuse sanctions for meets to be held on tracks a mile or under in extent, it will mean the building of specially designed motor car race tracks, such as the Brooklands track in England, and if motor car track racing is to continue there ought to be sufficient interest to support such specially-built tracks. It would not be a difficult matter to make some provision whereby cars of limited power and limited speed could be operated on mile tracks, but any such arrangement will have to be done under the closest scrutiny of the racing board or competent representatives. If the American Automobile Association is to revise its sanction and racing rules, there ought to be no difficulty about making provisions that will prove safeguards for the lives of those who may be either spectators or competitors. A most careful and consistent study of present rules, of conditions, of cars, of drivers and of all things concerning racing could easily result in a satisfactory solution of the race problem so far as small tracks are concerned.

PATHETIC AND ANTIQUATED

WITHIN a week Chicago was aroused over a tale told by the daily papers of how a maimed lad was rushed at breakneck speed in an ambulance in an endeavor to place the little fellow on a hospital operating table to save his life. As the story went the ambulance horses were continually urged to do better in the way of speed, the boy's father realizing that only extra effort on the part of the beasts would beat death. It required a long hour for the horses to cover 7 miles, although urged to do their best; but with all the effort of the horses the goal was not reached in time and the ambulance was turned into a hearse before its journey had ended. What might have been the result had that ambulance been equipped with a modern motor for its driving power? Assuming that the streets were miserably rough and the traffic badly congested, it would have been nothing of an effort to have placed the suffering boy within the hospital doors in 20 minutes—and, perchance, his life could have been saved.

MILWAUKEE was responsible for one of the most successful and well-conducted meets that have been conducted this season; incidentally it is to be credited with something in the record line. The 24-hour race went to two Locomobiles, which covered 1,146 miles, one doing 186 and the other 960 miles. But a Buick two-cylinder car went the entire distance without a struggle and covered 884 miles, while one set of Fisk tires did the service for something over 800 miles. These are good records and practical demonstrations. There was no question about the checking, for street car fare registers were used for the purpose and were in sight of the grand stand at all times, a scheme that might be used by other promoters with success.

ANOTHER race meet and another death —this time at San Francisco! Should it be a difficult matter for the American Automobile Association to make up its mind about giving sanctions for races that are designed to be run on small tracks and between cars of unlimited power?

IT MAY require some time and a number of horrible demonstrations to convince some people that a motor car is a dangerous thing when mixed up with a convivial party, and possibly these demonstrations will continue to be given, but they will be convincing to a few, at least. A case in point happened in a run between Manitou and Colorado Springs, with the result that three are dead, one fatally hurt and the other three escaped. Seven men—all more or less exuberant—all on one roadster built for three or four at the most! As a result, one man must answer to the state of Colorado for his part. He may be convicted of manslaughter or he may be acquitted, but he cannot undo the mischief and he cannot take away the sting motoring has received.

ST. LOUIS has demonstrated that the support of the trade is not absolutely essential in order to make a reliability run a complete success, for in such an affair held Saturday last there were twenty-six private owners who started, while sixteen finished with perfect scores. The idea of reliability tests is spreading and proving profitable to the trade and entertaining to the public, which naturally is interested in what a car can do, inasmuch as all people are prospective motor car owners—that is, they would be if they could.

ONCE in a while it is proved pretty strongly that there is something of racing ability in American-made cars, as witness the match event at 100 miles between a Packard and a Mercedes at Philadelphia last week. The Packard not only won the event, but went on and made a record by doing the century in 1 hour 57 minutes 26 seconds. Incidentally it might be mentioned that the last 3 miles were covered on three tires, else the beating might have been a little more severe.

INDICATIONS point to a great race in the 24-hour contest scheduled for Saturday at Morris park. It is to be a tough fight and—well, perhaps nothing serious will happen.

ITALY has already made many of its plans for the racing season of 1908. She has adopted the Ostend conference rules, but will recognize only such events as may have been scheduled some time within the first 3 months of the new year. This will be the means of shutting out some of the small affairs and will give the makers some idea of what they will be called upon to do in the matter of manufacturing racing cars and preparing for the big contests of the season. From the standpoint of the makers and the promoters the idea is commendable.

CHARLES J. GLIDDEN is enjoying an intermission in his tour of the world, having left London recently with the purpose of spending a short vacation in his own country. So far he has traveled 42,367 miles in thirty-five countries, has taken 2,000 photographs and has written about 200,000 words. Isn't this pretty good press work for Mr. Glidden?

FRANCE has about concluded its season of outdoor contests and will now devote its attention to show matters. The last event was the trials on the road between Salon and Arles, in Provence, wherein Bablot, in a Brasier, proved the star, annexing the 5 kilometer record, while other drivers made good showings.

THE WEEK IN BRIEF

American Automobile Association appoints committee consisting of representatives of trade associations and motoring bodies to investigate advisability of refusing to sanction racing on circular tracks.

The Locomobile wins 24-hour race at Milwaukee, creating a new relay record of 1,146 miles, beating Ford's 1,135; Mitchell is second and Buick third.

Legislators, lawyers and highway commissioners are guests of Springfield Automobile Club at Springfield, Mass., good roads and motor laws being discussed.

World's 5-kilometer record is broken by Bablot in a Brasier in trials at Provence, France.

Packard defeats Mercedes in 100-mile match race at Philadelphia, smashing world's record for century on a circular track.

Marquis de Dion declares a popular motor car never could have been built had it not been for American machinery.

Ernest Kelly, of the Dragon company, is killed while driving in California race against Bert Dingley.

Brilliant field is named for 24-hour race at Morris park, seven of the twenty cars nominated being of foreign construction.

Reliability run for owners only is held at St. Louis, sixteen perfect scores being made.

Bernin in a Renault starts after Chicago-New York record, now held by the Franklin.

Glidden is given reception by S. F. Edge before American tourist departs from England.

COMING MOTOR EVENTS

Morris Park Events—Second meet of Morris Park Motordrome Club at Morris Park, September 27-28.

Racing in Chicago—One-day meet of Chicago Automobile Club at Harlem track, September 28.

A. C. C. Show—Automobile Club of America's annual show at Grand Central palace, New York, week of October 24-31.

New York Show—A. L. A. M. show, Madison Square garden, November 2-9, M. L. Downs, 7 East Forty-second street, New York.

Philadelphia Show—Annual show of Philadelphia Automobile Trade Association, week of November 9-16. J. H. Beck, secretary.

Chicago Shows—Eighth annual Chicago show, Coliseum, and first commercial vehicle show at Seventh Regiment armory, both November 30 to December 7. S. A. Miles, manager, 7 East Forty-second street, New York.

Importers' Show—Importers' Automobile Salon exhibit of pleasure and commercial vehicles in Madison Square garden, New York, December 28-January 4.

Baltimore Show—Annual show in Baltimore under the auspices of Automobile Dealers' Association from January 21 to 26.

Buffalo Show—Sixth annual show of Automobile Club of Buffalo from March 9 to 14. Dal H. Lewis, 760 Main street, Buffalo, manager.

TRACK RACING IS THREATENED

American Automobile Association Appoints Committee To Investigate Advisability of Refusing To Sanction Meets on Mile Courses—Cup Action Is Approved

New York, Sept. 19—Motor Age's persistent and long continued setting forth of the dangers of track racing and reiterated queries as to whether such contests are to the benefit of the sport and industry have at last led to an official inquiry and tentative discussion being instituted by the national body controlling the sport. At the meeting of the executive committee and the board of directors held here today the following resolution was adopted:

Resolved, That a special committee consisting of the president of the association, Messrs. J. D. Thompson and Ira M. Cobe, of the racing board, and Messrs. S. A. Miles, National Association of Automobile Manufacturers, Charles Clifton, Association of Licensed Automobile Manufacturers, Benjamin Briscoe, American Motor Car Manufacturers' Association, and Percy Owen, Importers' Automobile Salon, at once take into consideration the question of future sanctions for racing on circular tracks or those originally intended for horse racing, and, after conferring with the affiliated clubs of this association and the representative national bodies of manufacturers, report at the November meeting of the board as to whether such sanctions should hereafter be granted.

President Hotchkiss has long been on record as opposed to track racing and it was he who interpreted the discussion that led to the adoption of the resolution in question. The argument of the president is that motor cars have now attained a speed far too great for them to be raced on circular tracks built for speed only. In the action it has just taken the A. A. A. does not commit itself to any expression of opinion pro or con, but aims to have the question fully discussed by those who, it all along has been argued, are most interested in and benefited by this form of competition. The A. A. A. seems to have put it up to the representatives named to secure from the members of their respective associations an expression of opinion on this vital racing question. It will be for the organizations in question to decide whether the opinion of their members can best be secured by a series of communications by mail or by meetings of the members for a discussion of the question. Special meetings of the various organizations interested may be called during show fortnight in this city, when dealers also will be present to participate in the discussion of a question of great importance to the selling end of the business.

It may be stated, however, from a local standpoint that no action that will attempt to prevent or interfere with the running of races on the motordrome at Morris park will receive much favor with the New York trade or public. The motordrome is 1.39 miles in circuit and with its easy curves and long stretches presents conditions that distinguish it from mile trotting circuits, even though it may not be quite the ideal course for motor car racing tracks of the type of the English oval would furnish. Sprint racing receives small attention at Morris park, the shortest distance seldom being under 25 miles.

Radical and positive action was taken to meet a frequent demand of late for a larger and more formal technical board than the present technical advisers of the racing board, who should have jurisdiction over other than mere racing contests, by the adoption of the following resolution:

Resolved, That the president be authorized to appoint a technical board, to which shall be referred all matters pertaining to contests of a technical character, including any contests between stripped touring cars, which board, or its executive committee, shall at all times, subject to the control and veto of the board of directors or of the executive committee acting in its stead, have charge of all such contests, with full power to make rules and enforce fines and penalties.

Approval of the action of the racing board in abandoning this year's Vanderbilt race through failure to secure military protection was voiced in the following resolution:

Resolved, That this board heartily approves the position taken by the donor of the Vanderbilt cup and the racing board of this association, to the effect that there should be no race for such cup over a public highway unless such course is policed by troops.

It was decided by resolution that hereafter the annual meeting be held in November and meetings of the entire board of directors will take place four, instead of three, times a year; viz., in February, April, September and November. The fiscal year was placed to begin on the first day of November.

A finance committee was authorized by resolution and power conferred upon the president for the appointment of such committee to audit the annual report of the treasurer for the current year and frame up a suitable financial policy for the future. President Hotchkiss appointed the following finance committee: George E. Farrington, treasurer; Colgate Hoyt, Automobile Club of America; Elliott C. Lee, president Massachusetts State Automobile Association; John Farson, Chicago Automobile Club; Isaac Starr, Jr., president Pennsylvania Motor Federation, and F. H. Elliott, secretary.

President Hotchkiss submitted to the board a very full and comprehensive report covering various branches of A. A. A. endeavor, accompanied by not a few suggestions and recommendations. In part Mr. Hotchkiss said in his report:

"The national body is now made up of sixteen state associations, comprising 109 clubs, fifteen clubs not affiliated with state associations and 550 individual memberships, a total of 18,550 members in all; in short, it has more than doubled its membership since the first of the current year. In a report to the executive committee at one of its recent meetings I called attention to the unsatisfactory financial system of the association, and I now call it to the attention of this board. Sooner or later, and, if possible, in the ensuing year, a modification of such system must be made. It is utterly impossible for a national association of motorists even to supervise the activities of state associations and clubs on dues which amount to less than 40 cents per member a year. Such dues do not begin to pay the expenses of the secretary's office. To properly conduct the association and do for its members what similar bodies abroad do for theirs, at least $50,000 is needed each year, and this necessity will yearly increase. If $50,000 is required to properly do the work, I need but ask how can it, or, rather, how much of it can be done on $10,000.

"The great shows now taking place in the fall and the work of the present year having developed the fact that the activities of the association practically cease during the touring season, I earnestly recommend that the fiscal year be again changed and be from December 1 to December 1, instead of from February 1 to January 1, as during the present year, and January 1 to January 1, as it would be hereafter. This would bring the annual meeting in November this year and set the new officers at work not later than the first of December, thus giving them 1 or 2 months more to get things done before the touring season sets in."

KELLY KILLED IN RACE

Sacramento, Cal., Sept. 19—Ernest R. Kelly met his death on the Sacramento track during the race meet held on the closing day of the state fair. Kelly was driving Percy Walker's Thomas Flyer in a special race against Bert Dingley in Fernando Nelson's Thomas. The rivalry between the owners of these two cars had become great since Walker's car won the 25-mile race at Tanforan a short time ago, and with two such skillful drivers the thousands in the grand stand were anticipating the most exciting race of the day. Dingley took the lead as he had the pole on the start. On the second lap Kelly began to gain and was going at a mile-a-minute clip when he struck the straightaway at the ⅝-pole. Suddenly the cheer which greeted his magnificent spurt was changed to a cry of horror as the red Flyer was seen to leap into the air and crash through the outer fence. The daring driver was thrown 20 feet from his car, which lay bottom side up, a mass of junk. Kelly was terribly crushed and torn, but remained conscious until his death, which occurred 3 days later. His grit and bravery excited the wonder of all who saw him, and the doctors in attendance said

that a man of less nerve would not have survived such terrible injuries an hour. The body of the young driver has been shipped to the family in the east. The Sacramento meet was one of the most successful held on the coast this year. It was the last day of the state fair and the attendance was greater than any of the days of horse racing which preceded it. The summary follows:

Five miles, touring cars, $1,500 to $3,500—A. H. Van Valin, Stevens-Duryea little six, won; A. H. Piepenberg, White steamer, second; Bert Dingley, Oldsmobile, third; time, 6:10.

Five miles, touring cars, $3,000 and up—D. Bonney, Stearns, won; A. H. Piepenberg, White, second; H. Halffner, Stearns, third; time, 5:19.

Five miles, gasoline runabouts, $1,500 and under—Tourist won by default.

Special race between two Thomas Flyers—Unfinished because of accident to Walker's car.

Five miles, stripped roadsters, over $1,500—Roy Rehm, Matheson, won; A. H. Piepenberg, White, second; time, 6:37½.

Event for racing cars, two 3-mile heats and a 10-mile final—First heat, Bert Dingley, Thomas Flyer, won; Roy Rehm, Matheson, second; time, 3:09½.

Second heat—A. H. Piepenberg, White steamer, won; D. Bonney, Stearns, second; time, 3:10.

Final heat, 10 miles—Bert Dingley, Thomas Flyer, won; Roy Rehm, Matheson, second; time, 11:15.

CHICAGO GETS BIG ENTRY

Chicago, Sept. 25—Thirty entries are already in hand for the fall meet of the Chicago Automobile Club at Harlem Saturday. Originally a 2-day meet which was to include a 24-hour race was scheduled, but this was abandoned and instead a strong 1-day card drawn up. Every event has filled and it is expected there will be interesting racing in the 10-mile open, the pursuit event and the hour race. In the last-named Coey's Vanderbilt Thomas Flyer will compete, being in a field which includes an Apperson Jackrabbit, a Ford six, a Cadillac and an American. Webb Jay will make his first appearance since his serious accident at Buffalo which brought his racing career to a sudden end. Jay, however, will only do an exhibition mile in a Stanley steamer. In addition to the motor car events three races for the motor cyclists have been arranged. Racing begins at 1:10 p. m.

HOLDS DRIVER RESPONSIBLE

Denver, Colo., Sept. 23—A coroner's jury at Colorado Springs decided that Albert W. Marksheffle, the driver, is responsible for the tragic accident in that city on the morning of the 17th. Marksheffle is under arrest, and the district attorney will prosecute him under the charge of involuntary manslaughter. The jury held its inquest over the body of W. H. Ralston, one of the three men who were killed, and found that the car was being operated by Marksheffle at a rate of speed far in excess of that permitted by the city ordinances, and that the death of Ralston was brought about by so running the car.

OWNERS PROVE SKILL

Sixteen of Them Have Perfect Scores in Reliability Run of St. Louis Automobile Club

St. Louis, Mo., Sept. 22.—Those who have contended that it is impossible to promote an event for owners of motor cars who have no trade affiliations and get enough entries to make it a success were proven in the wrong yesterday when twenty-six of the thirty-five who had sent in nominations for the reliability run of the St. Louis Automobile Club participated in the test. What is more, these owners proved they know as much about handling a car as do the tradesmen, for sixteen of the twenty-six returned perfect scores. The contest was for the Hagerman trophy and the distance covered was 86½ miles, divided into five relays or controls. The route was east from the St. Louis club on Lindell boulevard, out Grand avenue to the Gravois road and then by roads as follows: Denny, Manchester, Barrett, Dougherty Ferry, Valley Park, Manchester, St. Charles, Rock, Natural Bridge, Bridgeton, St. Francois avenue, Parker, New Hall's Ferry, Parker, Bellefontaine, Broadway, O'Fallon park, Florissant avenue and again Grand avenue to Lindell boulevard and the finish. The clean scores were as follows:

Car	H. P.	Driver
Pierce-Arrow	40-45	A. Moll
Packard	30	Samuel Plant
Thomas	40	H. S. Rumsey
Marmon	30	H. G. Werner
Packard	30	E. J. Walsh
Corbin	24	G. F. Durant
Stoddard-Dayton	30	W. Grayson, Jr.
Dragon	24-26	C. M. Barnard
White	20	C. E. Bascom
Stoddard-Dayton	35	F. H. Regel
White	20	J. C. Graham
Bates	16-18	Neville Bates
Thomas	40	W. J. Kinsella, Jr.
Pope-Toledo	50	J. G. Miller
Ford	15	J. E. Huiskamp
Buick	22	H. E. Michaels

The penalties were as follows: M. A. Heiman and Hanford Crawford, 999; Louis Wurzburger, 975; J. A. Hutcheson, 967; Edgar R. Smythe, 908; George W. Strodtman, 885; Harold Woodward, 728; W. J. Marshall, 702. C. P. Strother and J. Benoist Carton were disqualified for being more than 60 minutes late at a control.

Each car started with a credit of 1,000 points, the debits being for repairs or adjustments made en route or for being late at controls—just like the average reliability run, for that matter. For each penalty there was one or more points deducted, and of the eight who were penalized the one with the greatest debit had 298 points charged against him. Two only had one point, and the other three all were within 100 points of a perfect score. Two of the cars were disqualified for being more than 1 hour late at a control, so altogether the test amply demonstrated the driving ability of the local owners. The tie that exists has not been settled. It was up to the donor of the cup to figure out a way, but he declined to take the responsibility, so the sixteen most interested will meet next Saturday and endeavor to solve the problem in some way or another.

Moll acted as pacemaker for the contestants at the start, being sent away exactly at 10 o'clock. Going south on Grand avenue he encountered a brigade of mule wagons, the road menders being busily engaged heaping rocks on the highway. However, the motorists succeeded in getting by and after that it was easier sailing. All along the route the farmers were out to see the motoring cavalcade, and the best of feeling was displayed by the ruralites, who may, perhaps, be motorists themselves some day.

There was a good crowd at the finish and from Grand and Lindell avenues to the entrance of the St. Louis club the leader had 2 minutes to kill, and the pace would have made a tortoise look like a scorcher. Keeping the engine working steadily so as to avoid the fatal error of its stopping, the car crept along so slowly that it barely moved. Fifty feet from the finish enough time had been killed, and it glided over the last feet of the course to arrive exactly at 3:47 o'clock, 5 hours and 47 minutes after the start. Most of the others followed on schedule time.

PRAISES AMERICAN MACHINES

Paris, Sept. 15—Marquis de Dion, head of the de Dion-Bouton company, in an interview in the New York Herald, states that if American houses had not been in a position to supply certain types of lathes, drilling machines, gear cutting appliances and other intricate pieces of mechanism some years back when the motor car movement began to expand, a popular vehicle could never have been considered by the makers at that time, while all classes of cars would necessarily have remained at extravagant prices. Walking through the great works at Puteau the marquis pointed out different types of American machines employed. "Here," he said, pointing to a row of implements at work on boring cylinders and finishing castings, "are machines supplied by Brown & Sharpe, to my mind the finest makers in America of this class of goods. On the other side are automatic machines by Pratt & Whitney. We also use stamping machines by the same firm. Those drilling machines there are by Jones, Barnes & Co., while these metal planing machines come from the works of the Whitcomb Mfg. Co. One of the most important things in motor car construction is gear cutting. We have machines for this purpose supplied by various firms. Brown & Sharpe, the Gleason Tool Co. and Potter & Johnson have sent us most useful machines. For grinding up certain parts we have bought instruments made by the Morton Emery Wheel Co., but it is difficult to mention all the American firms to which we are indebted for the various classes of work. We have tried almost all of them."

TALK ROADS AND MOTOR LAWS

Legislators, Highway Commissioners and Legal Lights Gather in Springfield, Mass., for a Discussion Which May Help the Cause—Many Interesting Papers Are Read

Springfield, Mass., Sept. 25—Special telegram—This city has been the mecca of people interested in motoring for the past 2 days and in that time there has been said much that is of great interest to the users of cars and the public in general. What might be called a convention was the result of a lot of activity on the part of the Springfield Automobile Club, and when the guests it had invited here departed this evening for their homes they were delighted with the treatment they had received. No such an array of experts had been gathered together previously in the cause of motoring anywhere. They comprised legislators, highway commissioners, legal lights, etc.

It was the first advanced step toward giving the question of motor legislation and good roads national scope. The men who addressed the gathering knew their topics well and they handled them in a splendid manner. Their views bringing about discussions led to a general airing and exchanging of ideas that ought to be productive of the greatest good. The men representing the motoring class were sponsors for 50,000 at least. Others represented state and national governments and they all had the same idea—to work in harmony.

Yesterday morning the convention opened at the Cooley hotel. Mayor W. E. Sanderson started the proceedings with a few remarks and then the address of welcome was delivered by President H. H. Bowman of the local board of trade. There were present more than 100 representative men from the eastern states. Then began the reading of the regular papers on various topics relating to roads and legislation. The first speaker was W. L. Dickinson, treasurer of the American Roadmakers. His paper was "Continuous Lines of Interstate Highways." He pointed out the advantages of states co-operating with each other so it would be possible to continue from one to the other over fine roads. "Massachusetts Highways" was the title of the paper delivered by Chairman McClintock, of the state highway commission. Mr. McClintock reviewed the work of Massachusetts and showed how the expenditure of money years ago to build fine roads had brought prosperity to the state. Massachusetts did not wait for the motor car to come before preparing its roads, he stated, and for that reason when the cars came into use their owners flocked to the state in large numbers, so all the people in a measure shared in the revenue—from butcher to baker, machinist and maker, etc.

Dr. A. S. Cushman came on from Washington to read a paper. He is the assistant director of good roads in the department of agriculture. He spoke on "Good Government and Good Roads." He drew the inference that one aids the other, the two being inseparable, and he cited instances where such was the case. James H. McDonald, state highway commissioner of Connecticut, under the title "Different Phases of Highway Construction," showed how the state can do a lot of good if it succeeds in getting the co-operation of the towns. J. H. Edwards, chairman of the Rhode Island state board of public works, spoke on "Good Roads vs. Automobiles." He reviewed the work and expense to the state of the maintaining of roads because of the great number of big cars that go whirling to Newport each summer from all sections of the country. Robert P. Hooper, chairman of the A. A. A. good roads committee, addressed the meeting on "Good Roads from an Automobilist's Point of View." It was an essay dealing with the width and surface needed to insure comfortable riding. Paul D. Sargeant, commissioner of highways in Maine, had for his subject "Roads." He told of the plans now going on in his state whereby improvements are being made each year so it soon will be possible to go from New York to Quebec over fine stretches, utilizing the Connecticut and Massachusetts highways in connection with those contemplated in Maine. "The Present Problem of Road Maintenance" was the topic spoken on by R. D. Beman, deputy highway commissioner of Pennsylvania.

These papers took up the entire forenoon and there was a general feeling that something important was being done toward securing better conditions with such a galaxy of road experts giving their ideas and opinions. The forenoon passed quickly, for the papers were necessarily brief, yet they were concise and had an abundance of facts. The questions following each brought out more information. It was then time for lunch. The delegates were taken to the Hotel Worthy for lunch at 2 o'clock and the women who were present were dined at the Massasoit house. Later the latter were given a motor ride about the city.

In the afternoon the legal lights had their inning and their side was just as interesting as had been their brethren on roads. Congressman Frederick H. Gillett, under the caption "National Automobile Legislation," gave a fine presentation of what would be necessary to get the national government to take hold of the matter. President William H. Hotchkiss of the A. A. A. spoke on "Uniform Laws." The need of one law for all cars in interstate touring was shown and he told what the A. A. A. was doing along that line. Daniel E. Gay, of the Worcester A. C., talked on "Some Local Experiences with Automobile Laws." He related some cases of unjustifiable arrest and interspersed his paper with some humorous incidents. Senator William P. Hayes had for his topic "State Automobile Legislation." He dwelt with conditions in Massachusetts and told of remedies that might be brought about by the next legislature. "The Future Legal Aspect of the Automobile" was Frank B. Hall's topic. Ernest Howard, editor of the Springfield Republican, in a graphic speech under the title "The Public and Its Highways," pointed out that the motorists always should remember that they are not the sole owners of the roads. "The Legal Aspect of Motoring" was discussed by Xenophon P. Huddy, a New York attorney, and he presented the matter in a clear light. That ended the day's proceedings as far as the real work of the convention was concerned.

In the evening the Springfield club had its annual banquet at which all the visitors were present. This was held at the Cooley hotel and the big banquet hall was filled. Prominent citizens of the state were on hand and this feature of the program proved a delightful treat. It was purely a social session and the speeches made were short and witty, the weighty problems having been thoroughly digested during the day. This morning there was time for a few brief discussions of some of the papers read the day before and then the visitors were given a ride about the city in motor cars. The plant of the Knox company in this city and the Stevens-Duryea place at Chicopee were visited by the delegates.

NEW THOMAS TESTED

Buffalo, N. Y., Sept. 23.—The E. R. Thomas Motor Co. has just given one of its 1908 models an exhaustive test in a run to New York and back to Buffalo with the car loaded to its limit. George S. Salzman was at the wheel and Montague Roberts went along as a relief driver. The start was made from Buffalo at 3 o'clock on Friday afternoon. Accompanying the 1908 Flyer was the Thomas which established a new non-stop motor record in January by running 21 days 3 hours 29 minutes without a skip of the motor. William Turner, who drove a Thomas in the German army maneuvers last year, was in charge of the second car. Among those on the trip were Edwin L. Thomas, vice president of the E. R. Thomas Motor Co.; Mason B. Hatch, general sales manager, and Gustave Chedru, chief of the foreign designing department. At all times the big car carried seven people and their baggage. The trip to Elmira was made the first afternoon and evening and the

next day sufficed for the journey from there to New York, the party reaching the metropolis at 8 o'clock in the evening. The total distance of almost 500 miles was made in approximately 17 hours' running. The start was made from New York at 8 o'clock on Sunday morning and the run continued to Buffalo without cessation except stops for meals. Hard luck was encountered during the night as the car was lost for almost 2 hours at one time and later ran through a rain storm which delayed it considerably. Notwithstanding this fact the trip back, which was by way of Albany, Utica and Auburn, was completed by 10 o'clock on Monday morning, a total of 26 hours, including 3 stops of over an hour each for meals. This made a 1,000-mile journey in less than 3 days.

TOURING SOCIETY STARTED

New York, Sept. 23—Still another association is bidding to be added to the already long list of national organizations. The American Motoring Society has just been incorporated under New York state laws, its object being the promotion of touring and particularly the encouragement of long-distance jaunts a-motor. It is proposed to establish stations along main touring trunk lines, where supplies, accessories and touring information will be distributed to members. Supplies will be charged and a bill sent to the member on the completion of his tour. Data as to garages, local road conditions and hotels will be always on tap and members will be given aid in case of accidents to their cars. The headquarters of the society that plans to furnish tick en route and all these luxuries and conveniences to tourists is at 231 East Forty-seventh street.

RENAULT AFTER RECORD

Chicago, Sept. 25—Maurice Bernin in the Renault that won the recent 24-hour race at Morris park, started from here at 3 o'clock this morning in an attempt to break the Chicago-New York record now held by the Franklin. This is Bernin's second attempt to lower the record. He plans to start the car in the 24-hour race at Morris Park Friday afternoon and hopes to add to its fame by getting the cross-country mark. Dave Buck, driver of the Matheson in the Glidden 24, left for New York today to drive in the race.

INVADING ENGLAND

London, Sept. 13—The all-British motor car idea is growing. The latest information is that the Panhard, Mors, de Dietrich, Clement, Gladiator and Fiat are definitely going to be manufactured in England for the English market, while it is stated that the Mercedes and de Dion also will probably follow suit. The real reason for this, however, is the fact that the French manufacturers are charging their concessionaires prices which are in excess of the cost of manufacturing in England.

TWENTY IN THE RACE

Field in Morris Park 24-Hour Made Up of Seven Foreigners and Thirteen Americans

New York, Sept. 21—Not a place now remains to be filled in the line of starters in the 24-hour single-car race which is to be the leading feature of the meet of the Morris Park Motordrome Club on Friday and Saturday, the number being limited to twenty. The Renault, which won the last race on the motordrome course, establishing a new record for a single car race, 1,079 miles, has been again entered. The nominations for the race embrace seven cars of foreign make, the importers having entered into the 24-hour racing game with enthusiasm. It will also be noted that the Fiat has abandoned its policy of resting on its laurels won last year in the Vanderbilt race and in this year's road contests in Europe and entered the new game and that the winning Vanderbilt cup make in 1905 and 1906 are represented by two Darracqs for long-distance honors. The Stearns will also make its long-distance track debut. The twenty entries are a formidable lot of high-powered cars and are as follows:

FOREIGN

Car	H. P.	Drivers
Rolls-Royce	30	Burns and Fuller
Motobloc	30-35	Gilliard and Block
De Dietrich	60	Mack
Fiat	35	Cedrino
Darracq	40	Wallace and Munion
Darracq	40	Griffith and McCulla
Renault	35-45	Bernin and Lacroix

AMERICAN

Stearns	30	Vaughn and Warren
Stearns	30	Leland and Schlipp
Lozier	40	Smelser and Linkroum
Lozier	50	Michener and Milford
Matheson	50	Ryall and Reiffenberg
Matheson	60	Lescault and Buck
Welch	50	Truwen and Greenwood
Frayer-Miller	50	Knepper and Webster
Allen-Kingston	30-35	Campbell
Oldsmobile	40	David B. Brown
Simplex	50	Robertson and Poole
Packard	30	Wallie Owen
Studebaker	35	Holmes and Ditman

At the coming meet an interesting experiment is to be made in reproducing road conditions, which will be tried out by a 50-mile race for stock cars. A course to be known as the Allen road course has been laid out. Two-thirds of it lies over the broad straightaways on the home and back stretches. The remaining one-third is laid out in the infield over an ordinary dirt road. It contains a hairpin curve at the east end and a climb of appreciable grade preceded and followed by sharp turns and a winding road at the west end of the oval. If the experiment prove a success it is more than probable that a series of stock car tests will be run over the Allen road course the week preceding the opening of the first of the New York shows.

The 24-hour race will start at 8 o'clock on Friday evening. Forty more lights are to be added to the circle around the track.

Jefferson de Mont Thompson, chairman of the A. A. A. racing board and Vanderbilt cup commission, is due to arrive this week on the Baltic. Interviewed in London before his departure, Mr. Thompson said there was no doubt of foreign representation in the next Vanderbilt cup race, a complete Italian team and four French makers already having applied for the privilege of starting cars. He says that S. F. Edge is anxious to bring over a sextette of Napiers to race over the Long Island parkway against a like team of any other make. Following the arrival of the chairman, he will call a meeting of the racing board, at which he and Mr. Vanderbilt will submit the results of the meeting of the clubs of the world at Ostend and tell of their conferences abroad on racing matters. The A. A. A. will be asked to confirm the Ostend rules as to construction limitations of cars competing in international road races, which provide uniform rules as to cylinder dimensions, weight, etc. Mr. Thompson says that these rules will exclude brakes entirely. The new international rules, however, are not likely to be put into force before next spring.

MIMIC WAR IN ENGLAND

London, Sept. 14—England is in the throes of a mimic war. The Motor Union of Great Britain has resolved to crush the Automobile Association and has therefore decided to usurp the particular functions which the latter body has devoted itself to performing—covering the main roads with warning signs and policing them with cycles and employing scouts to warn incautious drivers of the proximity of police traps. The A. A. comprises about 3,000 of the elite of motoring society—and some others—and its leaders have taken the initiative in an offensive way by resigning membership in the Royal Automobile Club as a protest against the Motor Union's act. To understand this it is necessary to explain that the Automobile Club is linked up to the Motor Union so that every member of the club is ipso facto a member of the union.

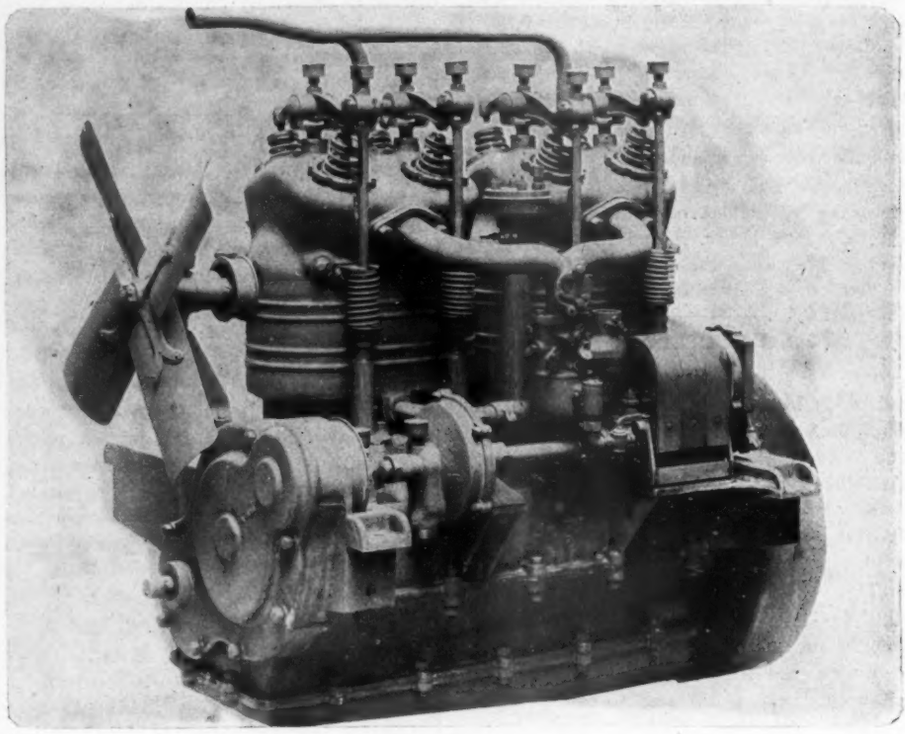
GALE CREDITORS TO MEET

Galesburg, Ill., Sept. 24—Creditors of the Western Tool Works have been notified that a committee representing more than $85,000 out of $120,000 of indebtedness of the concern has made a thorough examination of the assets and condition of the company and that a meeting of creditors will be held at the Grand Pacific hotel, Chicago, Monday afternoon. The working force at the factory has been reduced to a minimum and only work is being done necessary to complete a few cars almost finished. No payments are being made to creditors, and the plant and assets are being carefully preserved until the creditors determine upon a course of action. The committee desires to avoid the costs and expenses of bankruptcy proceedings, and favors handling the assets for the best interests of the creditors.

The Field of Motor Car Development

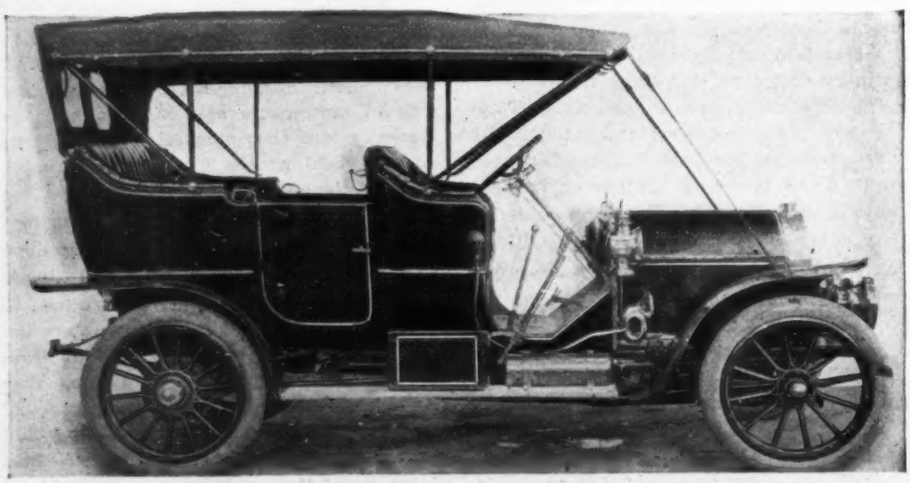
FIFTEEN HUNDRED men, 1,500 brains and 3,000 hands working at the manufacture of 2,000 Stoddard-Dayton cars for 1908 is the campaign well entered upon by the Dayton Motor Car Co. at its factory at Dayton, O. Progressing from an annual output of 1,200 this year to 2,000 next year called for factory enlargements and to take care of the increased production a new six-story concrete-construction plant has been built adjoining the present factory. In this addition will be located the company offices, paint shop, upholstering and woodworking departments and drafting quarters. By November 1 these departments will be located in the new building, the other departments absorbing the vacated spaces in the old factory.

The 2,000 output will be divided into four models: The 18-horsepower runabout, 8-H, is continued much as at present, but with 4 inches added to the wheel base, making it 92 inches. An I-beam front axle replaces the '07 tubular construction, and there is chrome nickel in the gears and shafts of the change speed gearset. The body has been altered by lowering the seats, placing them further back, inclining the steering column to suit and replacing the rear deck by a tool box. If desired a rumble seat can be placed there. The 8-F is the five or seven-passenger touring car in which is used the new Stoddard-Dayton engine characterized by valves in the head, copper water jackets and dual ignition, and having a wheel base of 113½ inches, 8½ inches longer than at present. There are improvements in the frame, axles, brakes, transmission, radiator, dash, pistons, oiling, ignition system, fan and cooling. The 8-K is a roadster with a chassis much as in the 8-F, except that the motor and gearset are carried 5½ inches further back, the steering column has more rake, the gear ratio is higher and tires are of ½-inch less diameter all around. The 8-G, the six-cylinder car, is practically as when shown at the Coliseum show last February, except for a few changes in the body. Of the 2,000 cars, 200 will be model H, 1,200 of model 8-F, 400 of model 8-K, and 200 of model 8-G, the six-cylinder machine.



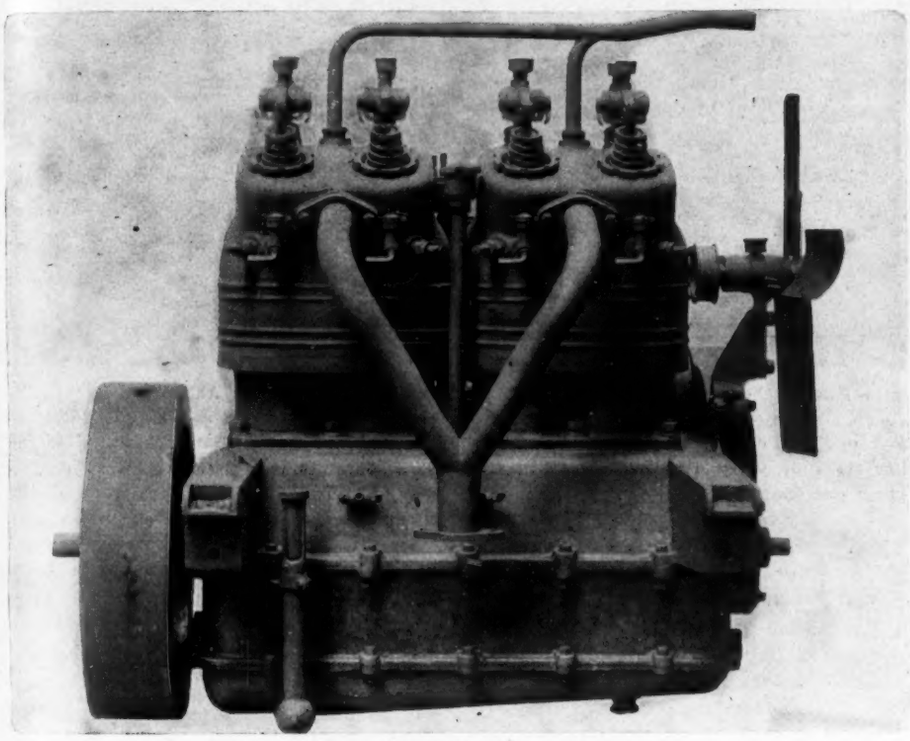
STODDARD-DAYTON 30-35-HORSEPOWER MOTOR, WITH VALVES IN HEAD

It is in the production of the 8-F touring car that the energies of the factory will be chiefly devoted. Of primary importance in this model is the new engine rated at 30 to 35-horsepower, with a cylinder diameter of 4¾ inches and 5-inch stroke. The diameter is ⅛-inch greater than at present, but the stroke the same. The engine, manufactured entirely at the company's plant, is radically different from the company's previous motors in that the valves are located in the cylinder heads, intakes angling in the right part of the head and the exhausts opposite. The intake and the exhaust valve for each cylinder are opened by a single rocker arm which is operated from the camshaft carried within the crankcase on the right. This change of style from the T cylinder to one with valves in the head was deemed expedient by Designer Edwards; not because of the defects in the '07 motor or dissatisfaction given by it, but rather because Mr. Edwards believes the motor with valves in the head to be the proper design in that it has a hemispherical combustion chamber obtained by crowning the cylinder head. A combustion chamber of this shape offers less surface area for its capacity than a T head one, and there is, consequently, less loss of energy by heat radiation. Using this style of combustion chamber and placing the valves in the head are also claimed to give a quicker and more responsive motor as well as one of greater power for a given bore and stroke. This is the type of motor that Dugald Clerk, the eminent English authority on motors, has advocated for years; it is the style of motor



1908 STODDARD-DAYTON, MODEL 8-F, WITH ROTUND BODY

1908 Stoddard-Dayton, with New Motor



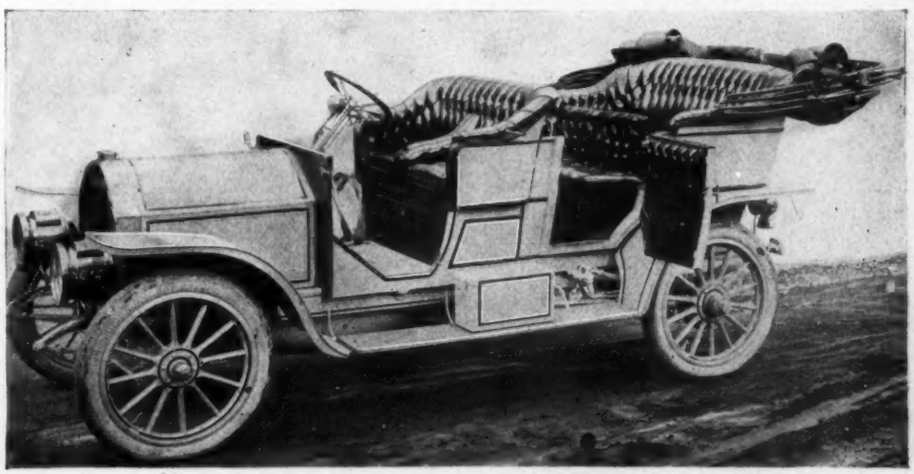
On the 1908 Stoddard-Dayton Motor Are Copper Waterjackets

used in the Darracq when it made its 2-mile world record in Florida; and it is the style at present used on such American cars as Welch, De Luxe, Pope-Toledo, Dorris, Moon, Pope-Hartford, the majority of air-coolers and a few other water-coolers.

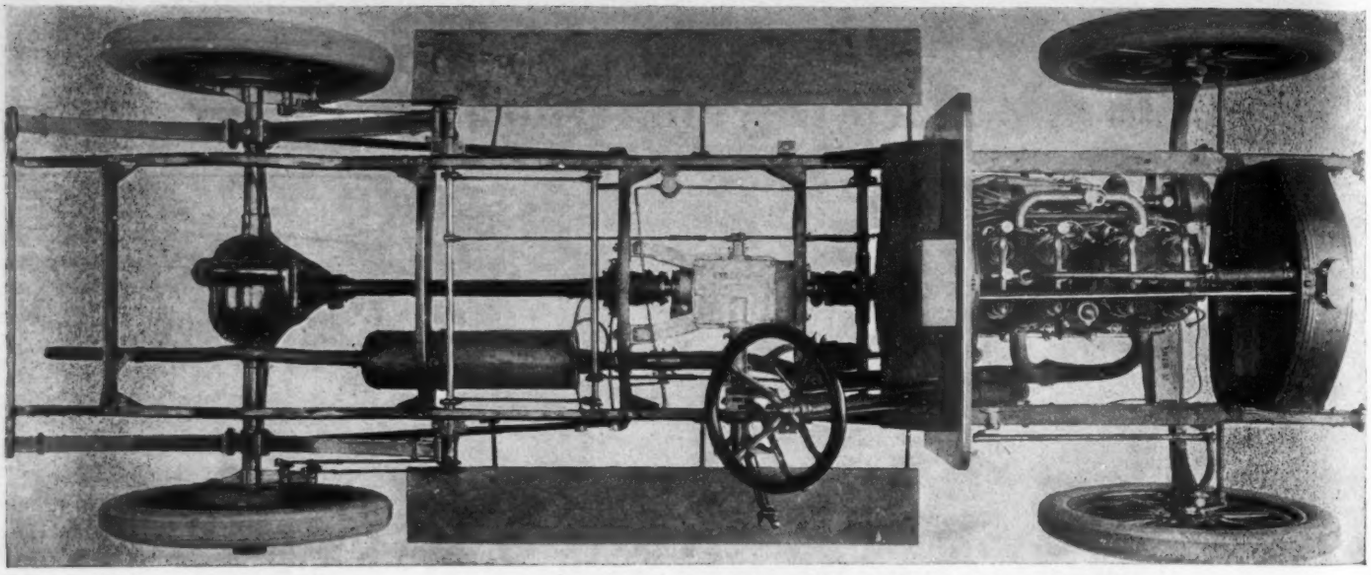
Heretofore objection has been raised to the motor with cylinders in the head in that it is noisier, but in this respect the Stoddard-Dayton 8-F offers little ground for criticism because the construction of the cams and other valve mechanisms has been so designed as to render the motor almost as quiet as the present one, so that for '08 this motor can be reckoned as one of the silent class. Using cylinders with valves so located brought with it the use of copper water-jackets for the cylinder walls. In the illustrations these jackets may be recognized by the four circling corrugations. They fit at top and bottom between two flanges on the cylinder castings, one flange in each pair being dovetailed and into which recess the margin of the water-jacket fits. The jacket is retained by leading the remaining space between the flange and the jackets. This construction, after having been under test for several months, has proved acceptable and capable of withstanding vibration and other probable troubles. In making the cylinder castings the company has profited by the experience of other manufacturers of this style of motor by having exceptionally large water spaces around the entire cylinder head as well as the intake and exhaust valves. In this way the designer claims to have effectively overcome this objection to overhead valves.

Next in the consideration of the valves in the engine head comes the overhead rocker arm which has been considered an objection because, in many cases, it has rendered the valves inaccessible. A look at the illustration will explain how this has been overcome in the Stoddard-Dayton. The rocker arm for each cylinder is pivoted on a center post threaded into the cylinder head between the valves. At its right end it hinges to the top of the lifter rod which rises by the side of the cylinder and rests upon the plunger stem entering the top of the crankcase and which, through it, bears upon the cam. The pivot bolt for the rocker arm has on one end an automatic hinged locking part. To unlock it requires but to spring it upwards until it is in alignment with the shaft of the bolt, when the bolt, together with the locking part, can be pulled out, the valve rocker arm lifted out of position and swung to the side, leaving the intake and the exhaust valve cages free to be unscrewed. By actual timing 5 seconds is sufficient for taking the rocker arm bolt and swinging the arm out of position, after which the amount of time required for unscrewing the valve cage is the same as in other cars. Particularly interesting in the rocker arm action is that the arm has a race of roller bearings at its center, and also another race at its left end, where it hinges to the top of the lifter rod. Each of these bearings is fitted with a small size compression grease cup.

Next to the change in valve location and operation comes the new oiling system, which is entirely encased in the crankcase of the motor, and one in which the accepted style of mechanical lubricator is eliminated. The lower part of the crankcase is made in two parts, the upper compartment forming what should properly be termed the base of the crankcase compartment, in which the crankshaft is encased. The lower part, a basement portion, is in reality an oil reservoir. Attached to the crankshaft is a small gear oil pump which draws its supply from the basement compartment and delivers it to a manifold or large diameter tubing about



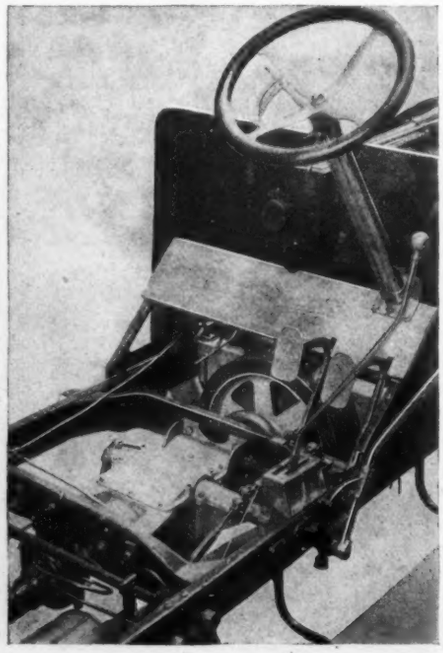
Straight-Line Stoddard-Dayton, with Extra Tonneau Seats



THE 1908 STODDARD-DAYTON CHASSIS HAS NO SUBFRAME AND SIDE FRAME MEMBERS ARCH OVER REAR AXLES

6 inches long, lying within the top part of the crankcase. Emerging from this large diameter tube is a series of oil tubes leading to the crankshaft bearings, camshaft and the commutator shaft, these tubes all being entirely contained within the crankcase. The pump forces a constant stream of oil through these pipes, the flow being more than ten times greater than that through the pipes of a mechanical lubricator. The overflow oil from the bearings falls into the crankcase and from there filters into the basement compartment, where it is ready to be circulated once more. There is not a splash system maintained in the crankcase proper. Thus the churning of the oil is eliminated. The oil going to the three crankshaft bearings passes through the bored crankshaft throws to the lower bearings of the connecting rod. The overflow from these bearings is thrown against the cylinder walls and cares for the piston lubrication. In order to lubricate the vertical shaft in the timer a spiral groove is cut in this shaft and the oil fed into a groove at the bottom of this ring so that the rotation of the shaft carries the oil upwards in the spiral groove between the shaft and its bushing. When the top of the shaft is reached the overflow oil is collected in a groove and led downwards by a spiral groove between the bushing and the aluminum casing for the commutator.

Among the many improvements in the motor is that of the double ignition system, with current taken from a Bosch magneto or a storage cell and delivered to one set of plugs located horizontally in the cylinder crown. Conspicuous in this dual system is the absence of wiring, there being only four high-tension wires from the magneto distributor to the four plugs, as shown in the wiring diagram on another page. A look at this diagram explains the simplicity of the wiring system and how it is possible to use a magneto and a battery with one set of plugs and one set of wiring. The magneto A has its four wires running direct to the plugs designated 1, 2, 3, 4, D is the single unit coil carried on the dash, C the commutator which has but two instead of four wires running to it, E what is termed the "switch over switch" on the dash, G and G-1 represent grounded wires, and B the storage battery carried on the running board of the car. It will be noted that the commutator C connects with the primary of the coil and is grounded, and that the battery B also connects with the primary of the coil and with the switch E. When running on the magneto the battery, coil D and commutator C are cut out by the switch E, the magneto A using its distributor for delivering current to the plugs. When running on the battery the magneto primary is grounded, rendering the magneto dead and the battery current commutated by C and high tensioned by the coil D is distributed to the plugs through the distributor in the magneto A. The switch E is a very simple contrivance carried on the car dash, with a switch handle which is thrown to right or left, according to whether the magneto or battery is used. By locating the magneto on the motor bed at the left rear the designer has been enabled to shorten the wiring between the magneto, the battery and the coil, so that the only exposed wires, namely, the four to the plugs and the two to the commutator, are carried in a fiber tube over the cylinder heads, thus eliminating extra wiring and saving some complication.

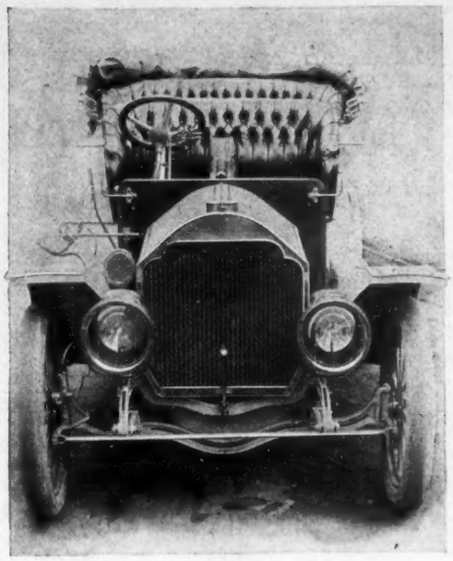


REDESIGNED STODDARD GEARCASE

The general layout of the motor is such that the magneto and centrifugal water pump are on one side driven by gear from the camshaft with the water pump shaft continued rearward to drive the magneto, jaw couplings permitting of the dismounting of the magneto or the water pump separately. Carried midway between these is the Schebler carbureter, communicating by a short piping with one branch to the front cylinders, the other to the rear. At the union of these pipes is placed a special air valve controlled from the steering wheel of the car, and which can be opened on high motor speeds so as to admit fresh air direct into the mixture. This valve is often used in descending grades, at which time the mixture supply can be cut off and the engine operated on an air compression, used as a brake. The crankcase top half carries the three crankshaft bearings as well as the bearings for the camshaft, but the lower half, as previously stated, is in two parts, a middle portion forming the bottom of the crankcase proper, and the basement portion serving as an oil reservoir. The intentions are to cast the lower portions in one, leaving out the dividing partition or floor between the oil well and crankcase and fitting a removable one in place. Half-time gears at the forward

end are entirely enclosed by a compartment, part of which is formed integrally with the crankcase. A change is noted on the right side of the top part of the crankcase, in that it has cast on it a long box-like compartment approximately a couple of inches in height. This compartment is empty and is used for the purpose of giving an extra long bearing to the plunger rods which carry the rollers that bear upon the cams on the camshaft. These bronze plungers are practically 4 inches in length and have a bearing surface their entire length, a condition which makes their operation easier and avoids tilting because of the cam movement. On this top part of the motor also are the side arms which support it not on a subframe of the car as formerly, but direct upon the side members of the frame. The water pump is changed in that it now travels at the same speed as the crankshaft and has been altered by increasing its diameter so that its peripheral speed is the same as when the pump traveled 50 per cent faster than the crankshaft.

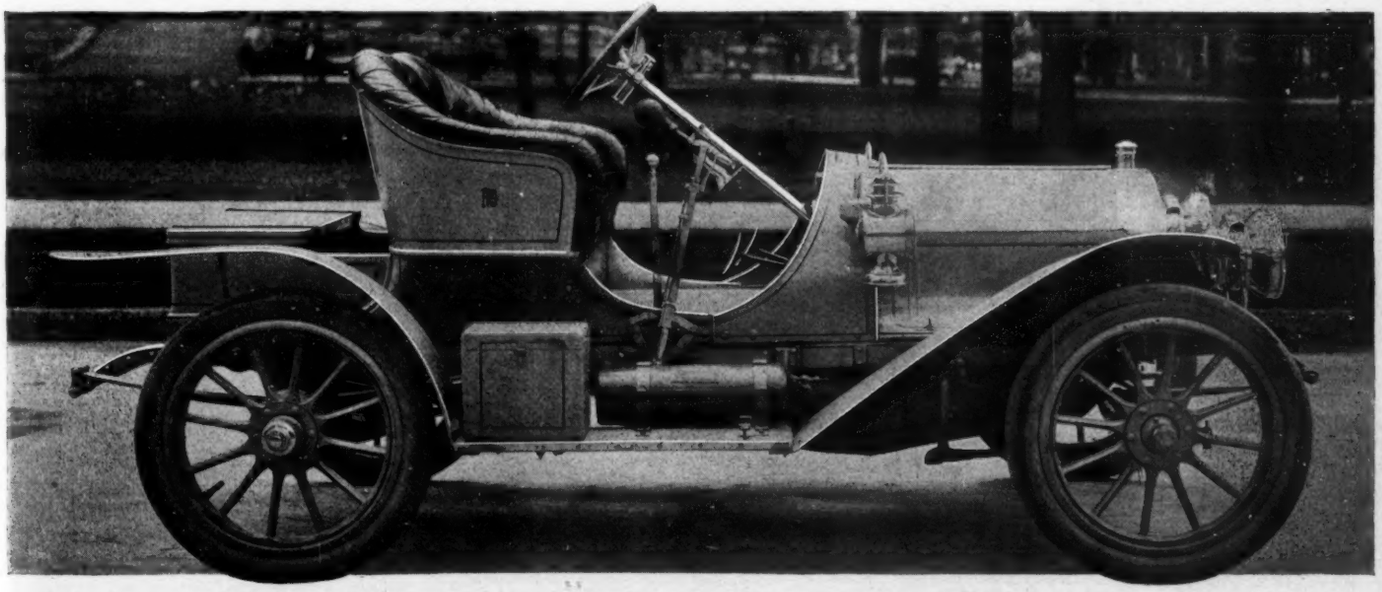
Altered also in connection with the cooling system is the vertical tube radiator so enlarged as to increase its volume 30 per cent. This enlargement has been accomplished by deepening it. The cutting off of the lower corners makes it conform with the style used by several American makers. Instead of using a small diameter filling tube on the top and covering it with a threaded cap, a large oval-shaped pipe is used, and its cover is a hinged lid with an automatic locker. With this filling cap it is possible to replenish the water supply without using a funnel. The four-blade fan is now mounted on a double race of roller bearings instead of ball bearings, and the side of the base of the fan support has a serrated face which fits against a corresponding serrated face on the crankcase so that by loosening a nut the support can be raised or lowered any number of serrations in order to adjust the fan belt.



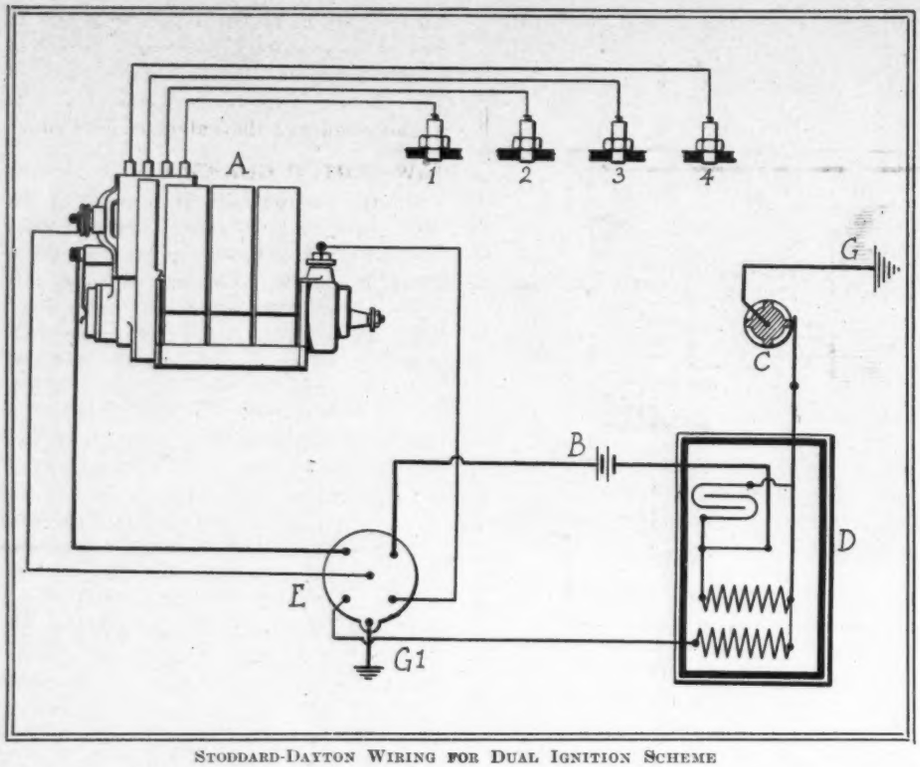
HEAD-ON VIEW OF STODDARD-DAYTON

The same care in the manufacture of the many interior parts of the motor is exercised as heretofore. The three-bearing crankshaft has its surface ground throughout; the entire inner surface of the cylinders is ground to a finish, and pistons and rings are ground. A new departure is the use of quadruple piston rings, four rings in each groove. Two non-eccentric spring rings are placed side by side in the bottom of the groove and over these are placed, side by side, two other eccentric rings. Four rings are used in the hope of causing an even outward pressure against the cylinder walls on all parts of the rings, this being done to overcome that uneven pressure often obtained with single eccentric rings, in that the rings bear harder upon one part of the cylinder wall than against the other. These rings have ground surfaces.

The transmission portion of the car shows fewer changes. First and foremost comes the cone clutch to which the company has pinned its faith since its inception, and which it proposes to retain. This clutch has a leather facing and the disengaging pedal is so compounded that the slightest pressure on the pedal is sufficient to disengage in spite of the fact that an extra heavy engagement spring is used. Changes in speed are made through a selective set offering three forward variations and one reverse. The gears and shafts are made from chrome nickel steel and are carried on Timken roller bearings. The case has been entirely redesigned and is now supported from two cross pieces of the frame instead of from a sub-frame, a change demanding the placing of two of the supporting arms at the front end and two at the rear. The case is now a single casting, with end openings to receive the bearings for the mainshaft and countershaft. A change has been made in the forward bearing of the mainshaft. The sleeve, which connects with the clutchshaft and has a hollow rear end, in which rests the forward end of the mainshaft to the gearset, is carried on two Timken roller bearings. Also a long roller bearing is inserted within this sleeve and between it and the forward end of the mainshaft. It is general practice to use a bronze bushing within this sleeve. The operating mechanisms are now entirely enclosed and altered. The transverse shaft carrying the emergency brake lever passes crosswise through the top of the case, a housing entirely enclosing it. Surrounding this shaft are two concentric sleeves, the outer ends of which sleeves have short vertical levers for locking with the lower end of the change speed lever. On the inner ends of the sleeves are drop arms within the gearcase, fitted with yokes for moving the sliding gears. It will be remembered that in the '07 car the gear-shifter rods protruded through the forward end of the case and a series of connections was



STODDARD-DAYTON 8-H, 18-HORSEPOWER RUNABOUT, NOW HAS I-BEAM AXLE AND CHROME-NICKEL PARTS



STODDARD-DAYTON WIRING FOR DUAL IGNITION SCHEME

needed between these rods and the change speed lever. As it is in the '08 car, all of these parts are greatly simplified and entirely enclosed.

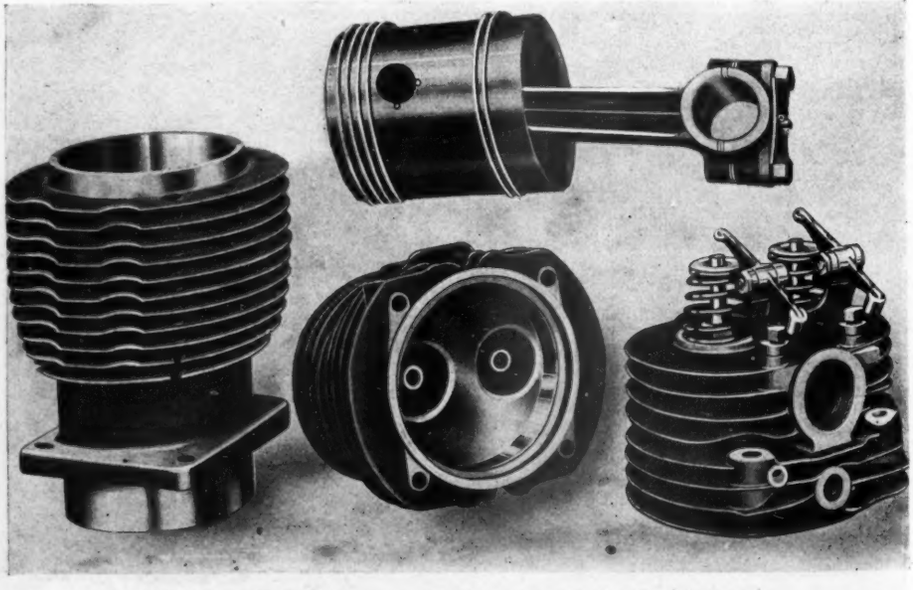
Drive from the gearset to the floating rear axle is through an enclosed shaft with a universal joint at its front end. The shaft housing is rigid with the differential casing at the rear. At the front it has a ball and socket support from a crosspiece of the main frame, this ball and socket support containing the universal joint of the drive shaft. Using an enclosed drive shaft eliminates the torsion rod, but in order to take all driving strain off the rear springs two radius rods are employed, these rods extending from the ends of the rear axle to ball and socket unions under the center part of the side pieces of the frame. The floating rear axle has its parts carried on Timken rollers. An improvement is noted in the method of driving from these shafts to the wheel hubs. On the end of each driveshaft is an integral flange equal in diameter to the wheel hub. On the inner face of this flange are three clutch teeth occupying one-half of its perimeter. On the clutch hub are three corresponding teeth, so that when the driveshaft is pushed into position its teeth interlock with those on the hub.

Improvements in the brake system include the doing away with the band brake in rear of the transmission and carrying four brakes on the rear hubs, two internal brakes and two externals, one set lever-applied, the other pedal-actuated. Both of these sets have the clutching members faced with camel's hair cloth. Instead of 1½-inch drum width, as used this year, the drums are 2½ inches wide and of larger diameter. Using this greatly-increased brake surface required the use of heavier hubs on the rear wheels. Although the present I-beam front axle has not given any trouble the company decided to make it considerably heavier to harmonize with the general heavier appearance of the car. The changes in the frame include the doing away with a subframe to carry the motor and gearset and the arching of the side members above the back axle so that the body of the car can be considerably lowered. This practice was started with the six-cylinder car last January, and has been adopted by one or two makers. Springs are semi-elliptics, manufactured by the Stoddard people, and the rear springs are shackled at both ends so as to take all possible driving strain off.

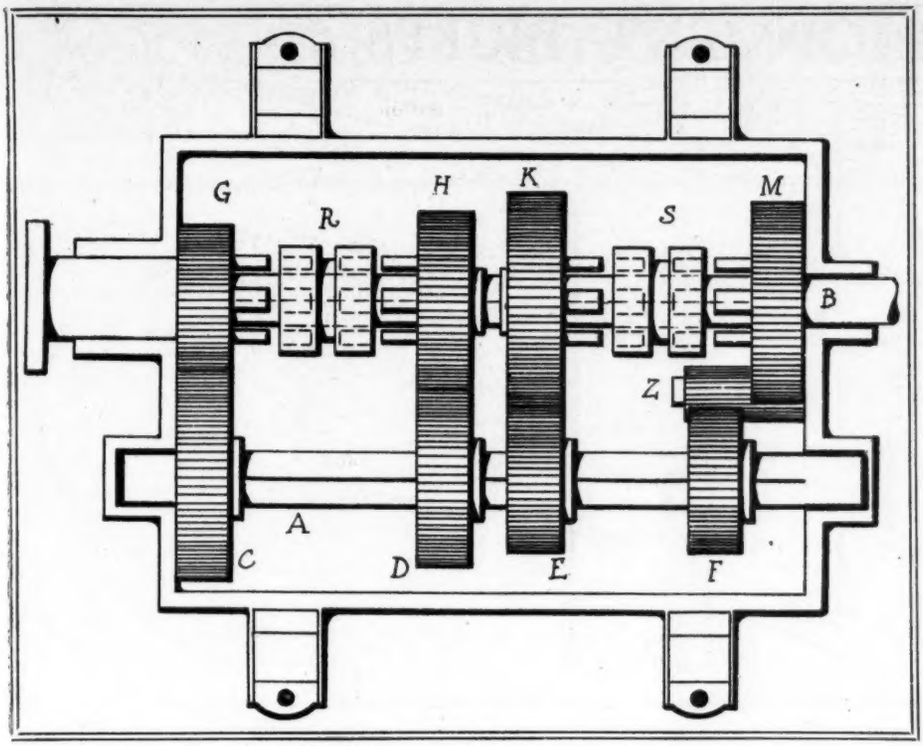
The '08 Stoddard-Dayton is an out and out home-made car. The company has within the last 2 months equipped a large foundry, in which it is manufacturing the majority of its cylinder castings and all of its aluminum and brass castings. In the large steel room of the factory are made all of the springs, the many drop forgings needed and the front axles. In another department are manufactured the frames used. Added to these can be noted the home manufacture of steering gears, radiators, steering wheels, bodies, tops and practically all parts except carbureters, wheels, electrical equipment and the Timken bearings.

MARMON IN TWO STYLES

Marmon cars for 1908 will be air and water-cooled machines. There will be two models, G and H, which will be fitted with four-cylinder air-cooled engines. The company will furnish a water-cooled motor in the model H. The maker, Nordyke & Marmon Co., Indianapolis, Ind., states its intention of continuing with the air-cooled motors and pushing them as vigorously as in the past. In the following description the improved air-cooled motor as used in models G and H only is referred to. At another time reference will be made to the four-cylinder water-cooled style. Model G is a five-passenger car, with 104-inch wheel base, 34 by 4 and 4½-inch tires front and rear, with quick detachable rims and tires, disk clutch, selective transmission, shaft drive and roller bearing steering column. Model H, also a five-passenger car, with room for two extra tonneau seats if desired, has a wheel base of 114 inches, 10 inches longer than in the G model. In other respects the details of the cars are alike, both having aluminum bodies, that on the G being of the straight line style, whereas that on the H is a combination of the straight line and curve.



MARMON CYLINDERS, WITH DETACHABLE AIR-COOLED HEADS



OSWALD'S SLIDING-CLUTCH SELECTIVE GEARSET

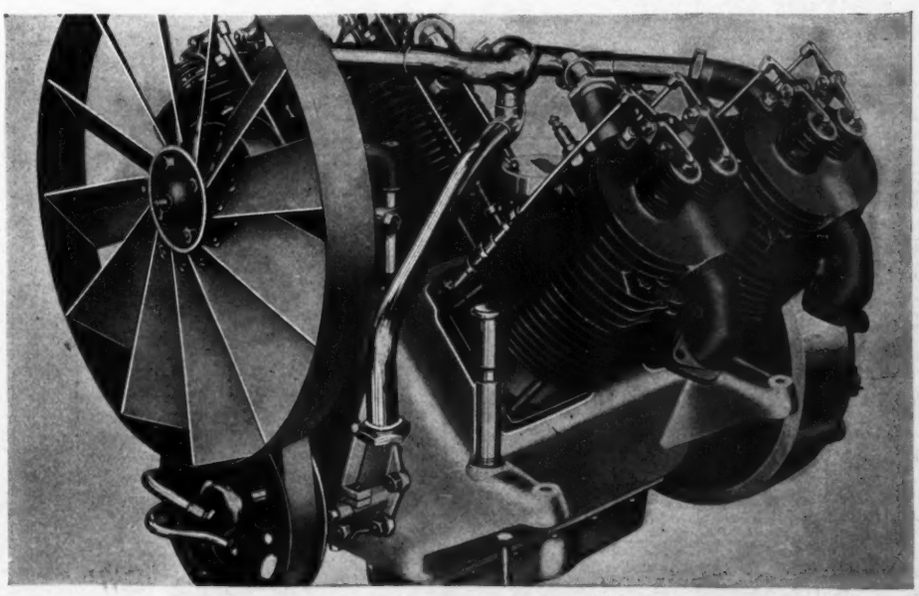
Retained in both of these models are such Marmon characteristics as a motor with the cylinders mounted V form in pairs at 90 degrees to each other, or 45 degrees from the vertical; motor lubrication through a hollow crankshaft; double three-point suspension in which the motor and gearset are on one three-point suspended frame and the body on another frame supported at its three points; and roller bearing steering geer as introduced last year.

The principal improvement in the Marmon 1908 air-cooled motor is the type of cylinder used. Heretofore the cylinders were in one piece and secured at their base to the crankcase; and the valves were in separate cages held to the cylinder heads by studs. The new cylinder, of 5-inch bore and 4½-inch stroke, is made in two pieces, as illustrated. The head is one casting containing the inlet and exhaust ports with air space between them and the radiating flanges. This construction does away with valve cages, the large valves being seated directly in the cylinder head. The head joins the cylinder just above the piston stroke, and is seated on a copper asbestos gasket. It is secured to the cylinder. Likewise the cylinder is fastened to the crankcase by four long studs passing through the radiating flanges into the case, with nuts on top. Removable valve stem guides are set in the heads. The rocker arm support is held to the head by three studs with nuts and lock washers. The head is tapped for spark plug and priming cock and the exhaust and inlet ports are threaded for the exhaust and inlet elbows. The exhaust pipe is attached with flanges and through bolts to the elbows and the copper intake pipe is secured to the intake elbow by a large brass union, a tight joint being obtained. The intake manifold is arranged to give a claimed uniform mixture of the gas to the four cylinders. By disconnecting the intake union and the exhaust pipe and removing four nuts, a head may be taken off of a cylinder and the cylinder also may then be slipped off, requiring only a few moments' time. This gives access to the parts for cleaning, grinding the valves or for any attention the piston may require.

There is but one joint—on the large gasket between the head and cylinder and with the four nuts on the long studs this joint is made permanently tight. More uniform and better compression is claimed than with valve cages. The head has large radiating surface and valve noise is reduced. At the end of a 3,000-mile test of one of these motors, covering a period of about 3 weeks' driving, the heads of the cylinders were removed and they were found clean and the valves in good order.

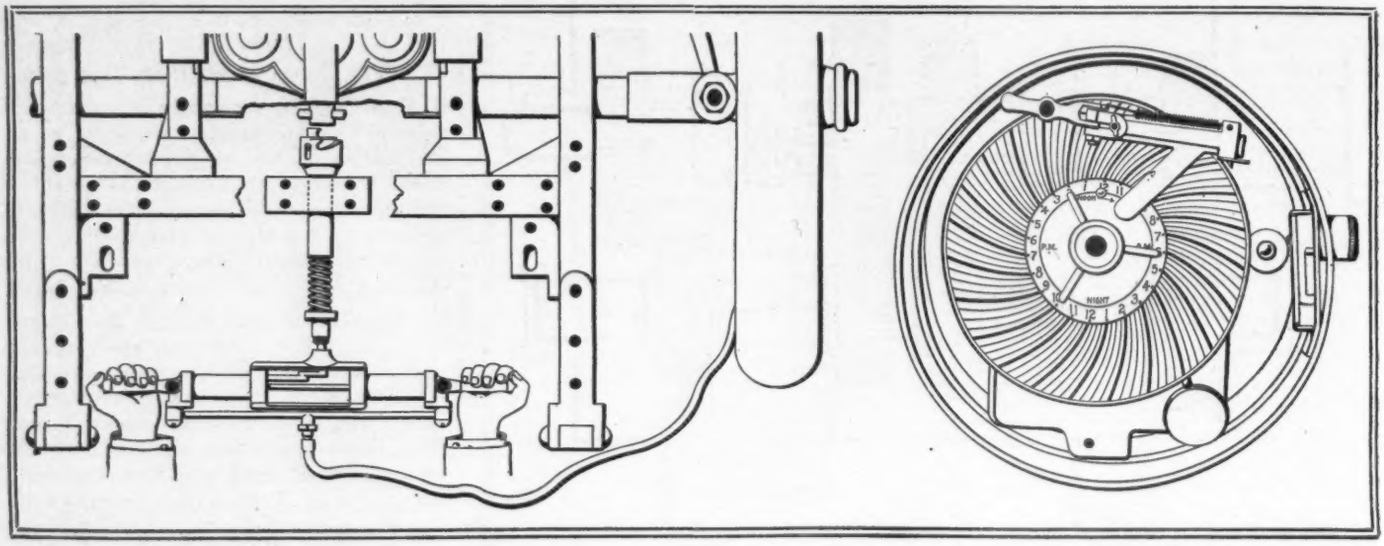
JAW CLUTCH GEARSET

On the countershaft or layshaft A are four gears, C, D. E and F, keyed in position. On the mainshaft B are four gears, G, H, K and M, constantly in mesh with those on the countershaft, but which gears are loose on the mainshaft. Between gears G and H and on the mainshaft is clutch R, by which either of these gears may be locked to the shaft, the clutch being constructed so that it always revolves with the shaft and when it locks with one or the other of the gears it locks those gears to the mainshaft. Between the gears K and M on the mainshaft is another similar clutch S for locking these gears to the shaft. The clutch R between gears G and H is used for first and second speeds ahead, the other clutch for low speed and reverse, the gear M on the mainshaft meshing with an idler Z, which is also in mesh with the gear F on the mainshaft to give reverse drive. The two clutches on the mainshaft are slid back or forward by any convenient means, such as side lever. These clutches are made with dental face teeth, which correspond with similar teeth on the gear faces so that the interlocking of the clutch and gear teeth gives a positive driving connection, accomplishing the locking of the gears to the shaft. Such is the gearset of E. A. Oswald, 515 Seneca avenue, Detroit, Mich. The clutches used on the mainshaft are forgings and by them the inventor hopes to get an easier locking of gears than is possible by meshing gears as in a regular sliding set. Further, he claims it does not interfere with the teeth of the gear which are kept in good shape, where with sliding gears into mesh the danger of chipping the corners of the teeth is ever present and is very destructive.



IMPROVED 1908 MARMON AIR-COOLED MOTOR

DEVELOPMENT BRIEFS



SPENCER'S DETACHABLE TWO-CYLINDER TIRE PUMP

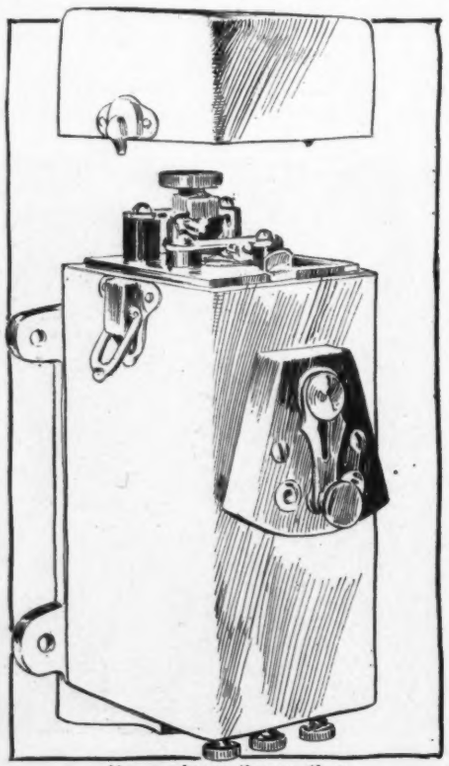
PHELPS' AUTOMATIC SPEED RECORDER

MOTOR WORKS THE PUMP

With the aim of eliminating labor in inflating tires, the Auto Pump Co., Springville, N. Y., has brought out the Spencer giant air pump, which is operated by the motor of the car. Unlike the majority of tire pumps driven by the motor, the Spencer is detachable, not being permanently connected with the car, but being carried in the tool box when not in use. In brief, it is a miniature two-cylinder opposed motor, which has two handles on the cylinder ends which the operator seizes when he wants to attach the pump to the car. As seen in the illustration, the crankshaft of the pump fits over the squared end of the starting crankshaft of the engine so that by pushing towards the engine on the handles of the pump the pump shaft is locked with the end of the engine shaft in the same manner as the starting crank is locked before cranking the engine. The pump is held in this position for the necessary time until the tire is inflated, which the maker claims never exceeds 3 minutes. The cylinders of this pump are united by an open and intermediate crankcase part, in which can be seen extending from end to end the straight one-piece connecting rod which carries a piston on each end. On the end of the shaft of the pump is an offset which connects by an intermediate link with the connecting rod near the left end.

BALANCED VIBRATOR A FEATURE

A balanced vibrator set with a very light tension so it may respond instantly and give the most delicate results in operation is advanced as the cardinal virtue of the Mesco jump spark coil marketed by the Manhattan Electrical Supply Co., Chicago. In this coil the light armature is so counterbalanced as to prevent jarring and shaking of the engine from interfering with the movement of the vibrator. Adjustment is by one screw, which is held against accidental movement by a locking spring. Contact points are of iridium platinum and special claims are made regarding the proportioning of the primary and secondary windings of the coil and the condenser so as to assure very little sparking of the contact points. The units in the dashboard type of coil for two or more cylinders automatically make contact when slipped into position. Dashboard coils are made for one to six cylinders.

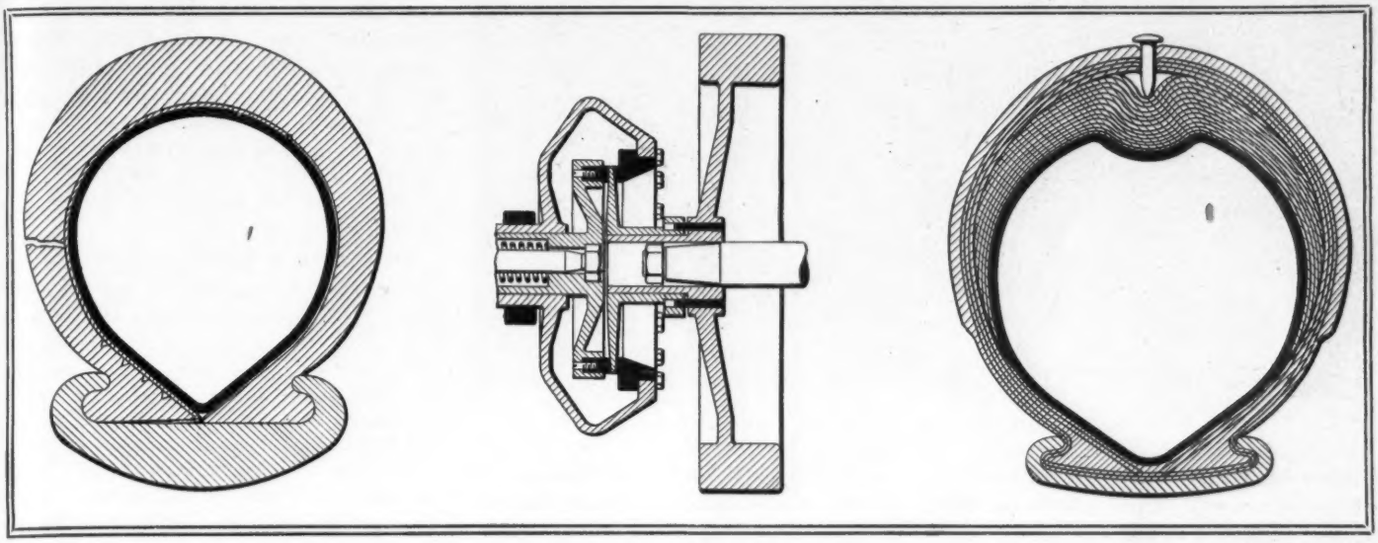


MESCO JUMP SPARK COIL

KEEPS TAB OF VEHICLE'S WORK

William S. Jones, 112 North Broad street, Philadelphia, is marketing the Phelps vehicle recorder, a device which automatically records the movement of vehicles of all kinds, such as motor cars, horse carriages, express and delivery wagons and heavy drays and trucks. The Phelps recorder consists of a circular aluminum case securely locked, which contains clock and other mechanisms as well as a dial of sensitized paper upon which is recorded the daily work of the vehicle. It records the car performance continuously for a day or a week, showing upon the sensitized dial the number of stops made, the length of each stop, the time the vehicle started the day's work, the hours of the day or night in which the vehicle was operating, the time of the return of the vehicle to the garage at the end of the day's work, the elapsed running time between each stop and start, and whether stops were made at the proper time of the day or night. The Phelps recorder, like other instruments of its class, consists essentially of two parts—a clock mechanism for rotating the sensitized dial and a connection by which impressions are recorded on the dial. The clock movements fitted are of the Seth Thomas nine-jewel, 12-day, compensating balanced type, built to stand the rough usage that cannot be avoided when the instruments are fitted to vehicles traveling over rough streets. The sensitized dials are printed on hard surface paper upon which a white record is made of an entire week, day or night. The mechanism is under lock and key and cannot be tampered with by the driver. It requires no connections by rollers, flexible shafts or otherwise with a wheel or any other movable part.

CURRENT MOTOR CAR PATENTS



TRAVERS' INNER TUBE PROTECTOR

BRUSH'S VARIABLE-SPEED CLUTCH

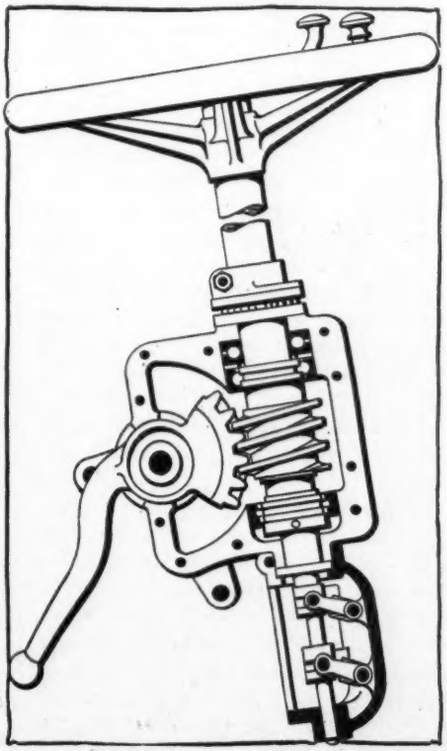
DRIESBACH'S REINFORCED TREAD

Inner Tube Protector—No. 866,539, dated Sept. 17; to P. C. Traver, New York, N. Y.—Should a tire casing become damaged by cut, blowout or other means an inner tube protector is placed between the inner tube and the tire casing. This protector is a three-quarter circular member adapted to conform to the curvature of the tire when inflated. On its lower edge is a flange which rests between the heel of the tire casing and the wheel rim while the remainder of its lines, as it were, the tire casing up one side and practically across the entire tread.

Variable-Speed Clutch—No. 866,186, dated Sept. 17; to A. P. Brush, Detroit, Mich.—Instead of using a transmission gearset to give forward speed variations the inventor employs a variable-speed clutch, one in which the clutch can be locked the same as the cone or disk clutch at which the driven member rotates at the same speed as the flywheel. At other times a rolling friction contact can be established whereby the driven member revolves slower than the flywheel. A friction disk carried upon the motor shaft contacts on one side with a ring carried on the driven shaft. The driven shaft has another ring which contacts with the opposite of the disk. Means are provided whereby the rings can be made to contact with the friction disk near its periphery or center, at which time the driven shaft is not axially in line with the motor shaft. When driving direct the motor shaft and the driven shaft are in line.

Reinforced Pneumatic Tire—No. 866,009, dated Sept. 17; to W. I. Dreisbach, Williamsport, Pa.—Between the inner tube and the tire casing the inventor places a thick reinforcing strip of crescent cross section. The strip is comprised of fabric cut upon the bias and composed of sections of different widths, the strip of fabric being wrapped longitudinally into several overlaid layers. These layers are secured together at the margins, only leaving their intermediate portions free, and binding strips are attached to the margins only for their attachment to the tire casing.

Steering Gear—No. 866,133, dated Sept. 17; to J. A. Herzog, Toledo, O.—This steering gear of the worm and sector type has the radius arm, which usually is attached or formed integrally with the end of the sector shaft, formed integrally with the sector and placed diametrically opposite to it, so that it extends out in rear of the steering gear casing. The housing or casing for the gear is made in halves with a vertical dividing plane between the halves and in the faces of these halves at the rear is left a slot for containing the hub portion of the sector, which completely fills the slot portion. The radius arm thus is entirely outside of the casing and as it raises or lowers in steering the hub of the sector entirely fills the slots in the casing halves, thereby forming an oil-tight steering gear case.



HERZOG'S STEERING GEAR

Gasoline Hansom—No. 866,294, dated Sept. 17; to W. J. Miller, Columbus, O.—This patent refers to the placing of a coupe or other enclosed body on a gasoline chassis and mounting the driver's seat to the rear of this compartment and elevating it so that the driver looks over the top of the enclosed compartment. The patent also includes the arrangement of the steering, braking, transmission and motor control parts conveniently around the driver.

Commutator—No. 858,956, dated July 2; to R. Clarke, Mount Vernon, O.—The revolving contact in this commutator is a beveled edge disk which constantly rolls between the beveled edges of the insulation of the commutator. Imbedded in this insulation are the two, four or six segments for taking the current to the plugs.

Pneumatic Tire—No. 866,297, dated September 7; to G. Noyes, Mandan, N. D.—In combination with a pneumatic tire having an inner and outer tube is a shield having opposite ends inserted between the tubes. This shield is composed of a strip of flexible elastic material, crescent-shaped in cross section, and is placed between the inner tube and the tread part of the outer tube.

FROM the FOUR WINDS

STEARNS CAR AT TOP OF PIKE'S PEAK

Meet for Kansas City—The Automobile Club of Kansas City announces it will hold a meet Saturday, October 19, on the mile track of the Kansas City Jockey Club.

Will Write for A. M. C .M. A.—The American Motor Car Manufacturers' Association has engaged the services of Charles E. Duryea to write comprehensive mechanical data for the association's members. Mr. Duryea is considered an authority on gas engines, and is a pioneer builder of motor cars.

Protest Against Austin Fails—The protest filed against the Austin car that won the 20-mile touring car race at Readville recently has not been sustained. The claim was made that the machine had two carbureters and that it was not a stock car. The referee inspected several other machines of that make, all of which had two carbureters, and so he could not uphold the protest.

Buffalo's Show Dates—Dai H. Lewis, secretary of the Automobile Club of Buffalo, will manage the sixth annual Buffalo show to be held in convention hall in that city the week of March 9, 1908. The exhibition will be under the auspices of the Automobile Club of Buffalo. Next year's event promises to surpass in point of exhibits, attendance and other features the shows held here in the past. In about 10 days the plan of floor and application blanks will be ready.

Palace Color Scheme Settled—Recognizing the fact that the motor car is an outdoor vehicle, the Grand Central palace show committee has not only gone to nature for its effects, but has taken also into consideration the season of the year in which the show is held. With this idea in view, an effort will be made to create an outdoor atmosphere combined with an autumnal woodland effect. This is to be brought about by the liberal use of natural autumn boughs and leaves which will be banked up against the columns, panels and balconies, and will form a suitable background for the cars whose varied shades are expected to blend harmoniously with nature's coloring in the leaves.

Conquered Pike's Peak—Photographs have been sent from Denver showing the Stearns seven-passenger four-cylinder car, driven by F. W. Leland, climbing Pike's peak, a feat never before accomplished by a motor car under its own power, it is claimed. The Stearns climbed 14,147 feet over a trail which near the top became so faint that it was practically indistinguishable. The car that made the climb up to the peak's top is owned by J. D. Hollingshead, of Chicago.

A. C. A. Car Emblem Adopted—The committee of the Automobile Club of America which was appointed to select some characteristic device or insignia in a form suitable for attaching to members' cars has adopted a neat plate which can be attached to the dashboard or radiator. These plates, which are about 3 inches square, are made of brass with the words "Automobile Club of America" at the top. In the center is the club flag enameled in colors on a black background, while at the bottom there is a serial number. In a circular letter to the members of the A. C. A. Melville D. Sheipman and Schuyler Skaats Wheeler, the committee which made the selection, say in part: "The plates will be useful in several ways. They serve as a means of identification and as proof of membership in the club. They may be useful in dealing with supply houses on the road and also possibly as a means of identification in case of trouble. It is, therefore, obviously necessary that members should agree to be responsible for the custody of the plates and to remove them from their cars if they allow the cars to leave their possession and ownership, and return them to the club in case they cease to be members of the club, or upon demand. In accepting the plates members will do so subject to the right of the club to retake its property wherever found, in the event that it is not returned as agreed."

Takes All Main Floor Space—Members of the American Motor Car Manufacturers' Association have taken every inch of main floor space at the Grand Central palace show, October 24 to 31. Last year the A. M. C. M. A. contracted for only the south side of the main floor, but owing to the growing membership list, it was decided to use the entire main floor, and a portion of the gallery for the display of commercial vehicles.

Glass Mystery Solved—A mystery consisting of a dozen heaps of broken glass along Indianapolis' residence streets was cleared up last Friday by the arrest of William Ball, a deaf driver for a bottling company. Early one morning a dozen complaints reached the police from motor car drivers that their tires had been punctured and that the streets literally were covered with glass. It was found a couple of days later that the end gate of Ball's wagon had fallen out, and being deaf, Ball could not hear the bottles as they crashed to the pavement.

Awake to Possibilities—Just 7 minutes were required by the voters of West Hartford, Conn., to talk over the new roads improvement law and vote to accept state aid. Former Highway Commissioner Sternberg introduced a resolution to apply for state appropriation, which was seconded and passed without a dissenting vote. The town will appropriate $20,000 for the work. The town roads are among the best in the state, directly on the New York-Boston route, so that the improvements will be generally beneficial. It took the town of Windsor Locks even less time to accept the $20,000 state appropriation and improvements will soon be inaugurated.

Humors of New Law—That there is humor even in an application for an owner's or driver's license has been exemplified by the secretary of state's office at Hartford, Conn., which has been swamped with business since the new law went into effect. The application is somewhat personal in trend and it is almost necessary for one to reveal his past. One owner in his application stated that he was 3 years old and 5 feet 8 inches in height. The application was returned endorsed, "Although you are large for your age, a license cannot be granted until you are older." Another shining light stated that his car "carried the whole family" in response to the printed question of how large the car was. Motorists are kicking for the reason that an extra force of clerks has been taken on during the rush, which will tend to eat up the accumulation which they would otherwise receive the benefit of. Since the new law went into effect there is a decided reform in power ratings. For instance, if a car has been rated 24-30

and the owner always quoted the larger rating, he is now content to merely say that it is 24 horsepower, for he thereby saves a little on his power-rating tax.

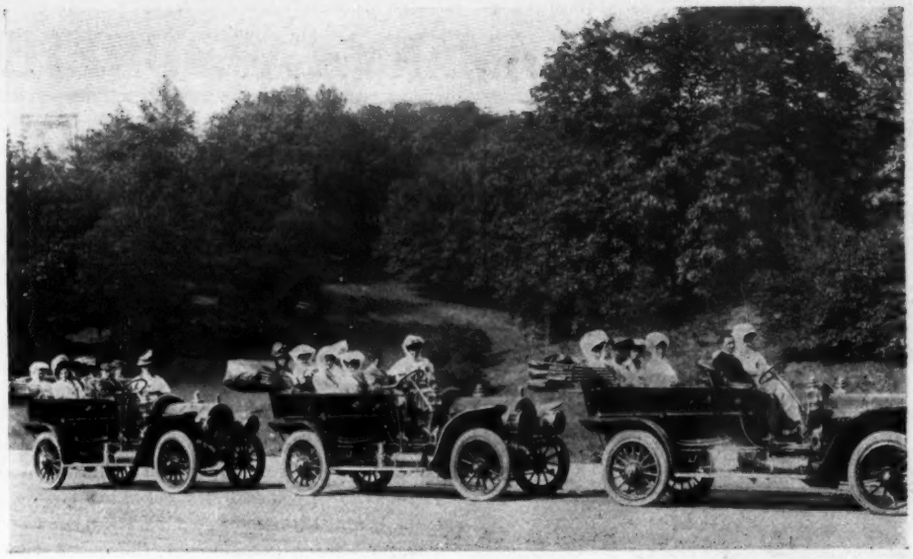
Disciplines Three More—The Massachusetts highway commission got busy again last week and as a result three persons had their licenses to drive cars revoked and one of them lost his registration. This makes a score of motorists who have been disciplined by the commission within the past few months.

Earle Likes Eastern Roads—Senator Earle of Michigan, one of the best known good roads men in the country, has been the guest of Connecticut Highway Commissioner MacDonald for the past few days and has taken occasion to inspect the Connecticut state roads. The man from Michigan expressed himself as well pleased with the showing of the Nutmeg state.

Rode in Royal Tourists—During the recent convention of Advertising Club in Cincinnati the Robert C. Crowthers Automobile Co., agent for the Royal Tourist and Elmore, entertained the wives of the visiting delegates by taking them a 25-mile ride through the suburbs of Cincinnati in four 1907 Royal Tourist cars. One of the cars, detained a few minutes by a puncture, failed to get into the photograph, which was taken at the entrance of Eden park.

Christie Complains—New York friends of Walter Christie have heard from him regarding the treatment he received in Pittsburg. While in the hospital he says he was not visited by a single member of the Pittsburg club or by the management of the race meet in which he met with his accident. The money which was guaranteed to Christie for his appearance with his front-drive racer has not as yet been paid to him, he declares. While the meet was nominally held under the auspices of the Automobile Club of Pittsburg, Christie writes his friends that the real promoters were Barney Oldfield and D. P. Collins.

Jersey Motorists Organizing—A state board of officers of the American Motor League is being formed in New Jersey, and sixty-one members in that state have been already appointed as representatives. Appointments to complete the board will be announced in a few days. In organizing the New Jersey state division, the twenty-one counties have been divided into seven districts, each of which will be entitled to a number of representatives proportionate to the list of league members enrolled within the district. State boards have been appointed in thirty-six other states and over 1,300 acceptances have been received from motorists in all parts of the country, who have been selected as representatives in their respective states. The work of the New Jersey state division will be strenuously directed to the securing of a revised law.



ADVERTISING CLUB GIVEN AN OUTING IN CINCINNATI IN ROYAL TOURISTS

The national committees of the American Motor League for 1907-1908 will be announced by President Potter next week.

Glidden Returns—Charles J. Glidden returned to New York from abroad Tuesday afternoon. He was accompanied by Mrs. Glidden and stated that his touring in England last summer had brought his total mileage up to 42,000. While in Paris Mr. Glidden had his first experience in ballooning. It was a pleasing one.

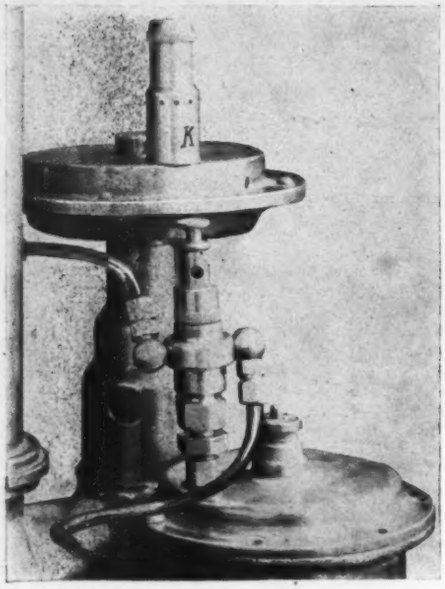
Used Hess-Brights—Statistics recently gathered by the Hess-Bright Mfg. Co. show that in the grand prix six of the sixteen makes represented had D. W. F. bearings, that sixteen of the thirty-seven starters had D. W. F.-H.-B. bearings, and that nine of the fifteen that finished were similarly equipped. In the emperor's cup race fifteen of the twenty cars placed had D. W. F.-H.-B. and that three of the four leaders used them. Of the thirteen makes of cars represented ten of them used the bearings.

Ford Managers Meet—The officers of the Ford Motor Co., of Detroit, finished Saturday a week spent in entertaining the branch managers of the concern. The latter were in attendance from Boston to Kansas City and the occasion was so successful that the announcement was made that it would be regarded as an annual feature of the Ford year hereafter. A trip to the home of the Automobile Club of Detroit and a banquet formed one of the features. Another took place Saturday morning, when the branch managers were given a glimpse of the Ford racing car, which was driven round the state fair track several times for their edification. The Ford racer will be seen in a formal attempt on the track records from 1 to 50 miles some time this fall and the attempt will probably be made on some New York track. This winter it is planned to send the car after the straightaway marks in Florida. It is a big, racy-looking creation, built largely of vanadium steel, with six cylinders, a V-shaped radiator, plenty of gasoline capacity, no spring at all and one little seat, perched over the rear axle. Ford says it will develop 120 horsepower.

Motor Car Ride for Masons—The largest number of motor cars ever used in an outing in the New England states carried the delegates to the masonic convention from Boston to various places of revolutionary fame a few days ago. There were eighty machines in the gathering and they carried nearly 500 people. Beyond a few tire troubles the entire party went along without delays and covered a lot of ground. Several parts of the metropolitan park system that are closed to motor cars were opened for the Masons, thus affording them a much better ride than would have been the case had they been forced to keep on the streets.

May Test Ordinance—It is probable that the speed ordinance of Toledo will be thoroughly tried out in the courts before long. The case of Harold Fraser, a local attorney, has attracted considerable attention in the police court, because of the direct attack made on the validity of the ordinance. This ordinance provided for a limit of speed to 10 miles an hour, and is in direct contravention with the state statutes, which provide for not more than 8 miles in the populous portion of municipalities, and 15 miles in other portions, and which further provides that no municipality shall pass ordinances differing from the state statutes. The ordinance is said by attorneys to be absolutely worthless, and if it is not tested in the present case, it is likely that it will be in some other, as the police officers have been especially active in the making of arrests under its provisions. At Perrysburg a similar ordinance is in force, but the officials are afraid of its effectiveness, and make their complaints under the statutes. Last Sunday a large number of arrests were made there, and every charge was filed under the state law.

GILLETT-LEHMANN CARBURETER CONTROLLER



CONTROLLER WITH COVER K OFF

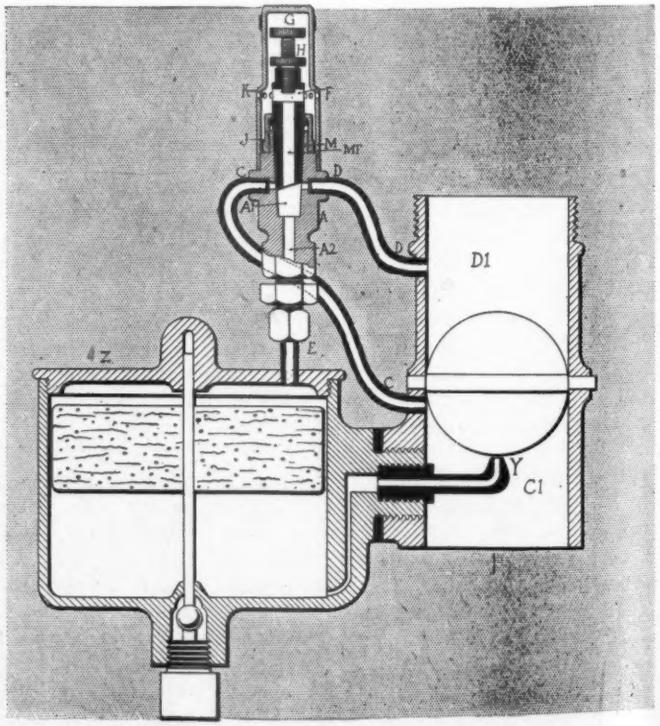
"AUXILIARY INTAKE valves in carbureters are wrong; the automatic air valve is not sufficiently delicate in movement, it possesses inertia—the inability to move except by outward force—and its own weight, the weight of the metal in the valve, retards its operation and it works too slowly. The auxiliary air valve was introduced into carbureters to equalize the air pressure in the mixing chamber, that is, so the air would have a constant or nearly so pressure around the spraying nozzle, thereby insuring an even flow of gasoline to mix with the incoming air. In this capacity the extra air valve has failed."

This carbureter broadside at extra or auxiliary air valves sums up the opinions Gillett & Lehmann, of London, England, hold regarding the efficiency and operation of the present mixture-furnisher for motor car engines. If these men made this assertion and failed to offer anything which they consider better than the extra valve they might be termed radicalists, rebellionists or anarchists, but as they offer a proposed solution to the problem of internal air pressures, they are freed from this stigma. In the following paragraphs appear a description of their device, the attachment and adjustment of it and a dissertation on the theory of its operation.

The Gillett-Lehmann carbureter controller is a small brass tubular affair 4 inches long, ¾-inch in diameter in its largest part and has three tubular connections, one with the float chamber, one with the mixing chamber, one with the intake pipe to the motor and in addition it has a passage to the outer air. Simplified: Picture a 4-inch tube with a 1-8-inch bore through it; connect the bottom to the float chamber, put a screw in the top so that the entrance of air can be regulated and bore a couple of holes into the mid-height of the tube, connecting one with the mixing chamber, the other with the induction pipe, and you have the Gillett-Lehmann controller ready for attachment.

The sectional illustration herewith explains this in detail: The main body A, turned out of brass, has a central bore, the upper half A1 conical in shape, the lower half A2 cylindrical. In the middle of the casing is an expansion where it is tapped at opposite sides for pipe connections C and D, one connecting with the carbureter mixing chamber C1, the other with the induction pipe D1, between the throttle and the cylinders. The bottom of the casing A is threaded to set into the top of the float chamber Z and in case there is not room on the top of the float a short pipe E is run from the casing to the mixing float chamber, this pipe being marked E in the illustration. In the conical portion of the bore in the casing A is fitted a tapered brass plug M with a small vertical hole M1 through it and a transverse hole F through its top. The bottom of this plug extends down in the casing to where it is tapped for the pipes D and C. Here its base is cut off on the angle so that by turning this plug it can be used to leave the openings to pipes C and D open, to shut one off and leave the other open, to shut both off, to leave both partly open or to give any desired adjustment between the two. A screw G closes the top end of the opening in the plug M. By turning this screw in the hole transverse F can be closed or given any degree of opening. The lock nut H is for retaining the screw G in any position. A covering K protects the entire top part of the device and keeps dust out. The cap J clamps the taper plug M in any position so as to retain the openings of the tubes C and D. A clockwise movement of the plug M would increase the opening to the pipe D and decrease that to pipe C. A contrary movement would lessen D and increase C. This completes the description of the device.

Examining the device in action on a carbureter with the motor running comes next. First and foremost, the float chamber Z of the carbureter must be air-tight or the device will not work at all. An owner fitting the device must then, first of all, procure an air-tight cover plate for the float chamber. Then he must open the hole F in the top of the controller by unscrewing G and start the motor, the carbureter feeding from the gasoline tank and taking in air just as it always has done. He must screw down the milled head screw G, closing the hole F, then air cannot enter through this hole and the engine soon stops. Why? Because the gasoline will not flow out of the jet Y or nozzle of the carbureter, due to the fact that the engine is sucking air out of the pipe C, this pipe drawing through pipes D' and E. Thus the engine suction is acting on the surface of gasoline in the jet and in the top of the float chamber Z and the gasoline cannot flow. Hence the motor stops. Next the hole F is opened by unscrewing of the nut G enough to let the motor get sufficient gasoline for normal speed, the lock nut H is screwed down to lock the screw G in that position and the first step in adjusting the controller is taken. When the screw G entirely shuts the hole F and the motor does not stop, then the float chamber is not air-tight and is must be made so. The balance pipes C and D might be obstructed. This would not affect the gasoline behavior in the float chamber, but the device would be quite

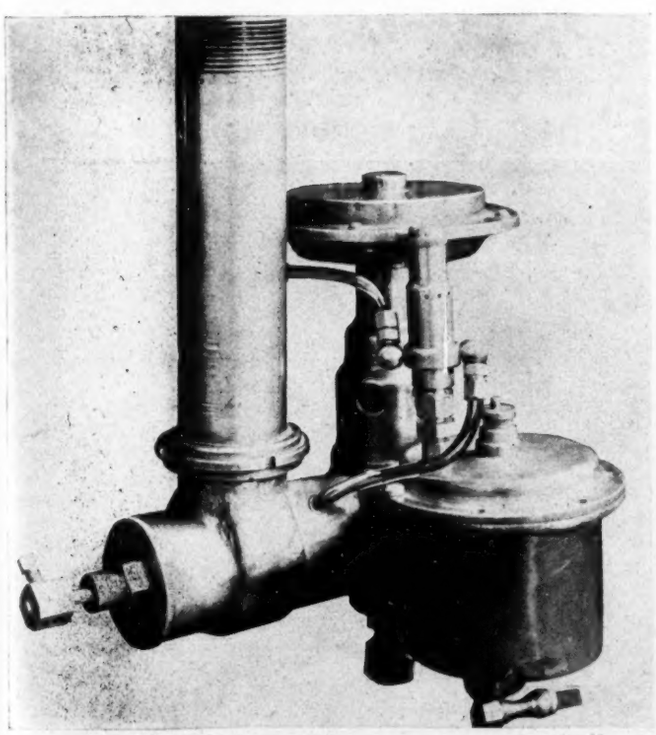


GILLETT-LEHMANN CARBURETER CONTROLLER IN POSITION

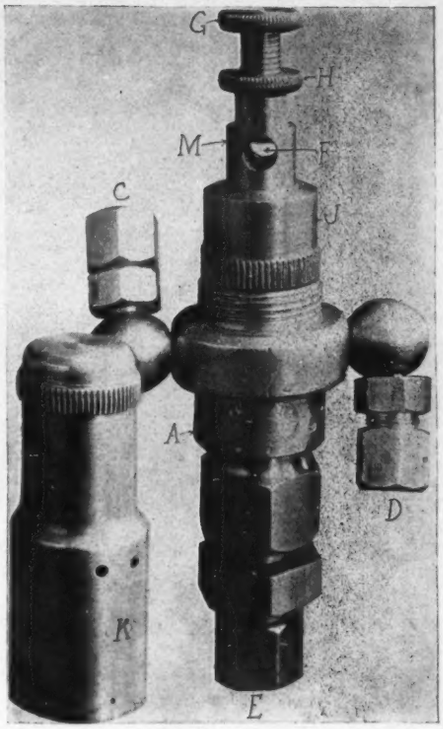
useless in its duty of equalizing pressures should this be done.

Next comes the adjustment of the taper plug M so the proper openings for the balance pipes C and D is effected. On the top of the plug M is a vertical mark which should be in line with a vertical mark on the casing A at which time there is an equal opening to the pipes C and D. To adjust these openings rotate the plug in its seating. Closing the pipe C leading to the jet chamber would cause the motor to misfire at slow speeds. This should be done and then rotate the plug backwards so that the motor does not misfire at these slow speeds. Lock it in this position by tightening J. The car then should be tried on the road, when its available power should be greater than before the attachment of the device. If it is not the driver should gradually open the air outlet F. When the adjustment is completed he should put on the cover K and the device should not be altered afterwards. Should the carbureter have automatic, or otherwise operated, extra air inlet valves these should be locked shut to get the best results, but if left in action they can do very little harm.

Lastly comes the theory of action of this device and why it produces even motor speeds and is economical in the consumption of gasoline. A column of air to feed the engine can travel at such an enormous speed that sufficient air to oxygenate the gasoline can enter, at the usual main air inlet to every carbureter, without the need for any other orifices. Experiments will readily prove this. Then, the jet being properly proportioned to the engine capacity, it becomes obvious that a single source of supply of fuel is adequate and ample. A throttle, being placed in the induction pipe, virtually rarifies the air that is drawn through and thus the charge becomes attenuated. Theoretically, the attenuation—when the engine is required to run slowly or with weak power—should apply to the gasoline and air proportionately, but owing to the variations in pressures in the carbureter this does not in practice take place. When the engine is running fast the pressure in the induction pipe will fall to, approximately, 13 pounds to the square inch. If the throttle be entirely closed the pressure in the pipe between the engine and throttle would fall considerably, probably to as near vacuum as the valve springs would allow, while in the mixing chamber it must have approached ordinary atmospheric pressure. When the throttle is partly open the pressure in the induction pipe, on the engine side, is less than on the jet chamber side, the pressures on either side of the throttle, therefore, being alike when the throttle is wide open and most dissimilar when it is tightly closed. When the engine is running the pressures in the induction pipe are constantly varying. But—and this is the important fact—the pressure on the gasoline in the float chamber has remained constant—at 14.7 pounds to the square inch, or the pressure which we experience moving about on the surface of the earth at the bottom of an ocean of air. If that pressure is constant and the pressures in the induction pipe are constantly changing, it is obvious that the flow of gasoline will often be out of all proportion to the requirements of the engine, and the air valve was introduced in order to raise the pressure in the induction pipe when the engine was running fast. But, from its very construction, the air valve must open late and it must close late, and a disturbing influence is at work to reduce its efficiency in the fact that the air which passes through it has an equalizing effect on the external and internal pressures and the outer atmosphere is then less capable of opening it. In effect, the valve tends to chatter on its seat and in any case it lags in its action considerably behind the requirements of the engine. Theoretically the action of the extra air inlet should be instantaneously suited to each individual stroke of the engine, and this is physically impossible. The Gillett-Lehmann device provides properly proportioned communication from the induction pipe—the disturbing variation caused by movements of the throttle being nullified by the fact that the balance pipes are taken one on either side of the throttle—to the float chamber, and it is claimed that each individual stroke of the engine acts instantaneously on the pressure in the float chamber, which forces the gasoline through the jet and proportions the flow of fuel to the draught through the induction pipe. And that is why it takes the place of the extra air inlet valve. It is estimated the saving in fuel will depend on the construction of the individual carbureter. Some carbureters are shockingly bad; others are extremely good, and it is because a carbureter is bad that the engine to which it is attached secures a reputation for extravagance in gasoline consumption. "Extravagance" in gasoline means something more than is compassed by the word. A man may be extravagant with his money, but he may be spending it usefully all the time; but when a carbureter is extravagant in gasoline it is actually wasting the spirit and preventing the engine from doing its best work. The evidence of this is to be found in the smoke and smell and noise that attend the working of some engines. If the waste be prevented these nuisances will be reduced to a minimum because no gasoline can go through the engine unburnt. There are no moving parts in the Gillett-Lehmann controller and so there is nothing to get out of order. The simplicity of the device and its fitting enables it to be fitted to all existing carbureters and it will be an exceptionally good carbureter that it will not improve.

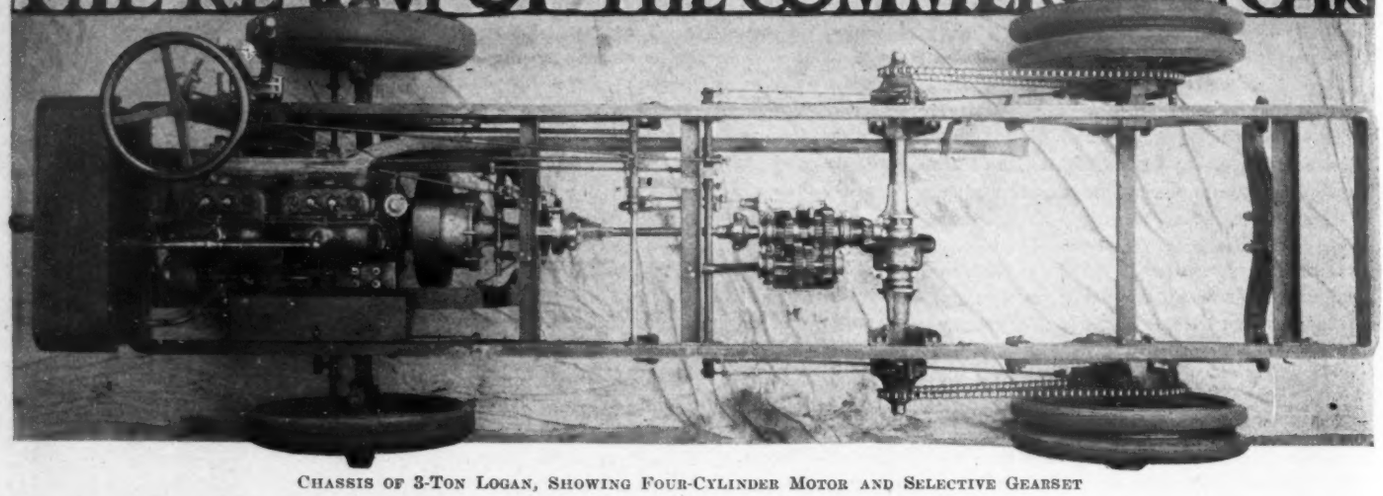


CONTROLLER FITTED TO AN APPERSON CARBURETER



CONTROLLER WITH COVER OFF

THE REALM OF THE COMMERCIAL CAR



CHASSIS OF 3-TON LOGAN, SHOWING FOUR-CYLINDER MOTOR AND SELECTIVE GEARSET

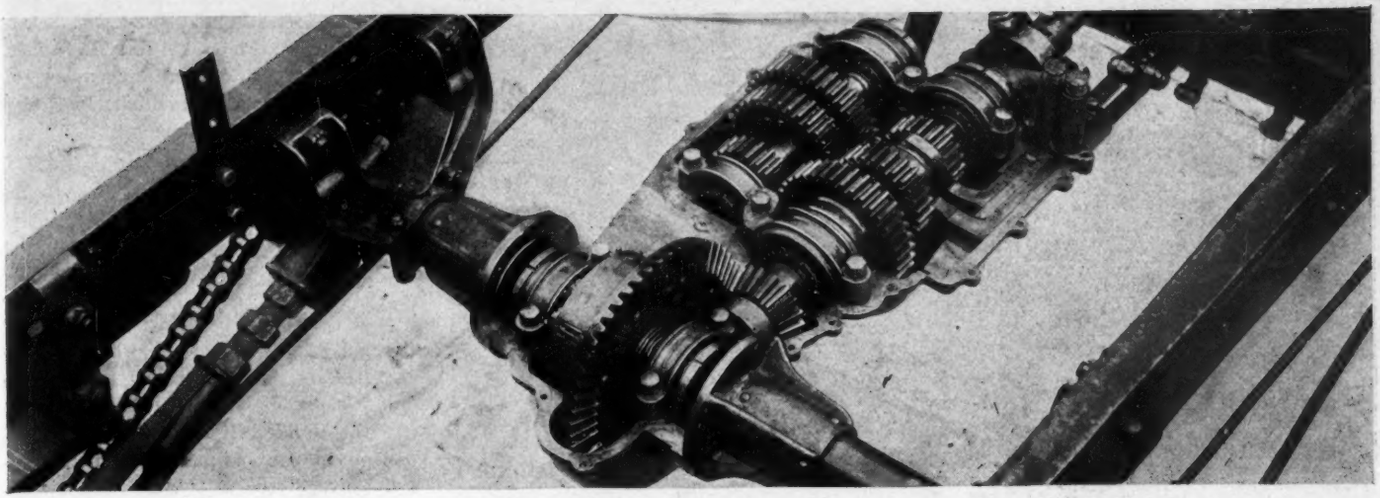
FOR next year the Logan Construction Co., of Chillicothe, O., has ready two trucks: Model S, a 3-ton vehicle, and Model T, a 1-ton truck. Model S, completed about 2 months ago, has since then been going through its preliminary tests and has shown creditably under various heavy services. As a truck it differs materially from previous Logan constructions. First, it is fitted with a 40-horsepower, four-cylinder, water-cooled, motor mounted longitudinally in front. The motor has cylinders cast in pairs with integral water jackets and valves side by side on the right. From the motor power is transmitted through a multiple-disk clutch carried in the large diameter hub of the flywheel which is continued rearward to accommodate it. From this clutch a propeller shaft, provided with two universal joints, transmits to a three-speed selective gearset carried in front of the rear wheels. Incorporated in the rear of this case is the differential gear, as well as the center part of the jackshaft. On the outer ends of the jackshaft are sprockets for chain drive to the rear wheels.

This brief analysis shows how vast are the changes in this car as compared with the lines of previous Logan trucks. Returning to the motor, its cylinders have 4¾-inch bore and 5-inch stroke; the oiler is incorporated with the engine base and is a gear pump which forces the oil to the different motor parts, after which it is returned and filtered, ready to be used again. Cooling is by large tubular radiator with pump for maintaining water circulation and a fan to provide additional cooling. A complete jump spark ignition system with throttle and spark control levers on the steering column is provided. The other control parts are change speed and emergency brake levers at the right and clutch and running brake pedals carried in the footboard.

The disk clutch operating in an oil bath has fitted to it a brake, automatically applied at periods of disengagement, which brake prevents spinning while shifting gears, thereby making the shifting of gears quicker and quieter. The company claims to have given particular attention to the construction of the selective gearset used, and in order to insure strength uses gears cut from Krupp's chrome nickel steel with six-pitch and 1¼-inch face. Shafts are made from this material and a combination of Timken and Hess-Bright bearings carries the shaft. Peculiar in the transmission is its mode of suspension in that it is carried at the rear in the housing for the jackshaft, this housing resembling the axle casing of a shaft-driven car. Drive-chains, ¾ inches wide and made with 1½-inch pitch, are guaranteed to withstand a strain of 60,000 pounds and to give good service for at least 2 years. These chains lie in the direct pulling line with the tops of the sprockets on the jackshaft and those on the rear wheels and radius rods are placed directly in line of this pull between the two sprockets.

Strength has been taken care of in the running gear of the car by the use of heavy parts throughout. The frame of 5-inch rolled channel stock is made in two pieces, each piece forming a side member and the half of each end. These pieces are riveted together at the center of the ends. Front springs, full elliptics with eleven leaves, each 5-16-inch thick and 2½ inches wide, measure 38 inches in length. The rear platform system has the three members made with twelve leaves, each 3 inches wide. A solid steel bar, 2½ inches square, forms the rear axle, and has Timken rollers for carrying the wheels. The front axle of I-beam construction is fitted with Timken bearings on the wheel spindles. A point in connection with this axle is the large steering knuckles in which the weight is carried on roller bearings, so that steering is made easier. Fitted on the 36-inch front wheels are solid tires 5 inches wide, and on the rear drive wheels are twin tires, each 3½ inches in width. Assisting the front axle and full elliptic front springs are radius rods one on each side, extending from the axle rearward to a point midway of

LOGAN 3-TON TRUCK, FITTED WITH CANOPY TOP



ON THE 3-TON LOGAN THE JACKSHAFT IS ENCASED LIKE A FLOATING REAR AXLE

the frame and seen in the illustration.

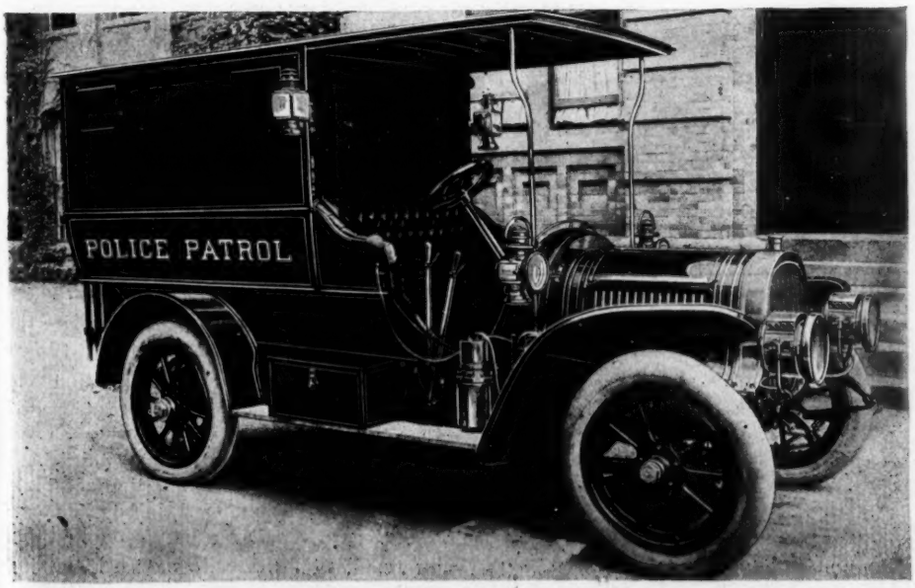
Five brakes are provided, one set on the rear hubs, one on the jackshaft just inside of the sprockets and one on the clutch. The rear hub brakes are applied by lever, the set on the jackshaft by pedal and the clutch brake is automatic, engaging when the clutch is disengaged. Steering is through a worm and nut gear with vertical steering column and large wheel. The wheelbase of the car is 108 inches, the tread, 60.

POPE-HARTFORD PATROL

Last week mention was made regarding the purchasing by the Hartford, Conn., city corporation of a Pope-Hartford patrol wagon for the use of the police department and this week is illustrated this wagon. It is fitted with a 30-horsepower Pope-Hartford motor, has 112-inch wheel base and with fuel and water tanks full weighs 3,500 pounds. The carrying capacity is eight, with ten by slight crowding. Entrance is by the rear, a flight of rubber-covered steps being necessary. On either side of the steps is a heavy brass rail—an indication of police custom. The seats fold and in case of necessity the vehicle could be used as an ambulance. Particular attention has been given to the lighting system, which includes two brass acetylene headlights, two dash sidelights, two electric sidelights on the body, a rear electric light and an electric domelight on the center inside. The dome light is controlled from the rear end of the left seat, but all other lights from the driver's seat. A 10-inch brass gong is fitted. Speeds ranging from 5 to 40 miles per hour are possible. Three brakes control the retarding of the car, two of which are on the rear wheels and the third on the drive shaft in rear of the gearset. Five-inch tires are fitted on all the wheels.

SHANGHAI WIDE AWAKE

The commissioner of customs at the port of Shanghai, China, recently made a report regarding the introduction of motor cars for transportation purposes at that port, the report being in part as follows: "There is also some idea of supplementing the tramway by lines of motor buses. One of the alternative schemes to the tramway, and one which was strongly advocated, was to have no tramways at all, but lines of motor vehicles. This scheme was negatived, mainly upon the hypothesis that the native could not be trusted to become a reliable chauffeur. Curiously enough, the reverse has proved to be the fact, and no modern invention has developed more rapidly in Shanghai, or contributed more to the expansion of the town, than the motor car industry. Garages and repair shops are springing up in all directions, and the large number of valuable cars, all of which are most of the time solely in charge of the native chauffeur, would strike any newly arrived occidental as exceptional anywhere. Many wealthy natives have acquired cars, which they drive themselves at times, and enormous motor vans, used by firms which have their stores far removed from their offices and the municipal council's new motor chemical fire engine, all prove how welcome and serviceable the new industry is to this flat country."



POPE-HARTFORD CARRYING A PATROL BODY

SOME COMMERCIALETTES

A large number of Darracq taximeter cabs have arrived in New York and are being commissioned as quickly as possible.

The municipal authorities of Reading, Pa., have placed an order for a small Yorke Pullman touring car to be used by the chief of their fire department.

Chief of Police Delaney, of Denver, has been provided with a Thomas-Detroit runabout, purchased for him by the city and which is for his use while making tours of inspection around the city and to the different sub-stations as well as for general police work and responding to emergency calls.

Baltimore has installed its first motor car police patrol which has entered into the service of the central police district. After inspecting the vehicle Marshall Farnan made a trip up the steepest hills of the city which proved to the satisfaction of all the suitability of the car for its work. Besides serving as a police patrol it will be used for a while as an ambulance in the central district of the city.

AMONG THE MAKERS AND DEALERS

DENVER POLICE CHIEF'S THOMAS FLYER ROADSTER

Moves Into New Place—The Auto Accessories Sales Co., of St. Louis, will be located at 3919 Olive street after October 1, which is in the heart of the motor trade of the Mound City.

Owen Gives Up a Branch—R. M. Owen & Co., selling agent for the Reo and Premier, will give up their Chicago branch, the agency for the two cars being taken by the Walden W. Shaw Co., the Berliet agent in Chicago.

Lozier Appointments—George Blakesley, president of the Crescent Automobile Co. of Jersey City, has taken the Lozier agency for 1908. The Sid Black Automobile Co., of Cincinnati, last year agent for the Franklin and Lozier, will continue to handle that line for 1908. It will confine its attention to the sale of the Lozier and Franklin exclusively. The Orlando-Kessler Co. of Columbus, O., also has announced its intention of representing the Lozier in that vicinity for .1908.

Overpeck Succeeded by Lea—Dr. J. R. Overpeck, who has been at the head of the International Motor Car Co. of Philadelphia, has been succeeded by E. S. Lea, formerly sales manager of the Walter Motor Car Co. of Trenton, N. J. The International concern handles the Darracq and the Walter and with Mr. Lea's accession to the managership will take on the local agency for the F. N. motor cycle, a Belgian product of the four-cylinder variety.

Muncie to Have Another—Within a short time a second motor car factory is to be established in Muncie, Ind. The concern will make a specialty of gasoline delivery wagons and trucks, although pleasure cars will be manufactured. It is understood that Thomas F. Hart, until recently vice president of the American Window Glass Co., will be at the head of the company and will be associated with J. Madison Maring, a former business partner, and Edmond Ball, a fruit jar manufacturer. The company will be organized within the next few days and a contract will be let for the erection of a large factory building.

Takes Old M. & W. Plant—The Reliable Dayton Motor Car Co., of Chicago, has leased the entire plant formerly occupied by Morgan & Wright at 15-21 North May street, Chicago, where it will manufacture Reliable Dayton cars.

Jackson Joins Thomas—R. B. Jackson has been appointed general manager of the E. R. Thomas Motor Co. Mr. Jackson has had technical training under some of the most noted engineers of the country, and for the past few years has been identified with one of the oldest motor car companies as factory manager.

Bald a Maxwell Manager—Following the formation of the Maxwell-Briscoe-Pittsburg Co, E. C. Bald has been placed in charge of the Pittsburg Maxwell affairs. The company is erecting a two-story white-glazed brick garage at Forbes street and Meyran avenue. This will be the distributing point for a territory 200 miles wide, all the smaller towns being supplied from Pittsburg instead of from the factory direct.

Boyd Company Reorganizes—A reorganization of the Boyd Automobile Co. has been announced in Indianapolis, and with an increase of capital, extensive improvements will be made to the company's garage and salesrooms at 417 Massachusetts avenue. With the reorganization A. W. Conduitt becomes president, J. A. Boyd vice president, W. E. Boyd secretary and treasurer and C. R. Newby general manager. W. W. Reagan will have charge of the sales department, having had several years' experience with the Nordyke & Marmon Co., the Capital Automobile Co. and the Indiana Automobile Co., all of Indianapolis. Stanley has been appointed mechanical superintendent and will be assisted by R. A. McGrath and H. Tomer. The company has the state agencies for the Stevens-Duryea and Buick and also operates two large sight-seeing cars.

Chase Quitting Maxwell—A. F. Chase, of the Maxwell-Briscoe-Chase Co., of Chicago, will retire from his position as the company's representative in Chicago and he will be succeeded by T. F. Smith, at present Chicago representative of the National Cash Register Co.

Lawwell in Business—Frank A. Lawwell, formerly with the Oscar Lear Automobile Co., who drove the Frayer-Miller car in the Vanderbilt cup races, will open a garage in the old church building on South Third street near State, in Columbus. The building is now being fitted up.

Pittsburg Dealers Nominate—The Pittsburg Automobile Dealers' Association nominated these officers last week: President, W. N. Murray; treasurer, G. P. Moore; secretary, Arthur L. Banker. The association is arranging a big clam bake, to which every member is privileged to invite ten friends.

Fuller Takes More Space—Alvan T. Fuller, Boston representative of the Packard and Cadillac cars, and who claims to have the largest retail store in New England, having a large section of the Motor Mart in Boston, has been forced to secure more room. He has engaged the quarters formerly occupied by the Apperson, which adjoins his own store, and after several changes this section will be entirely devoted to the Cadillac cars, giving more room to display Packards.

Looking Into Bus Business—A visitor to this country is William Weir, of the firm of J. S. Weir, Ltd., of Glasgow, manufacturer of pumps and condensers, who arrived last week on the Lusitania. Mr. Weir is visiting this country for the dual purpose of watching the operation of the pumps, condensers, etc., which the concern installed in the new steamer, and also to ascertain full particulars with regard to condtions and a field for the manufacture in this country of the Darracq-Serpollet trucks and buses, of which a large number is in use abroad.

Matheson's Gotham Home—The new home of the Matheson car in New York, a concrete and steel five-story and basement building located between Forty-ninth and Fiftieth streets and running from Broadway right through to Seventh avenue, soon will be ready for occupancy. It is opposite the present quarters of the Palmer & Singer Mfg. Co. This latest addition to New York's row has been so constructed that three stories may be added whenever necessary. The decorating and finish both within and without this building are highly artistic. The upper floor has been arranged as a repair and stock room; three intermediate floors will be used for the garage, capable of accommodating 150 cars; a salesroom, 36 by 40, with a mez-

zanine balcony and offices, will be located on the main floor. The building is provided with two large elevators, each having a lifting capacity of 12,000 pounds.

Will Move Its Branch—On October 1 the Philadelphia branch of the Hartford Rubber Works Co. will be removed from its present location at 138 North Tenth street to 1425 Vine street, within a stone's throw of gasoline row.

Weather Vanes for Garages—This week every mercantile motor garage in Pittsburg will be equipped with a weather vane in the form of an image of the car it sells. The orders were placed by L. A. Flanner of New York city.

New Pittsburg Concern—The Bellefield Motor Co. is a new Pittsburg concern which will start off 1908 with the agencies for the De Luxe, Queen and Pennsylvania cars. The Bellefield company has a big garage and will have a livery business in connection with its sales department.

Ajax Branches Opened—Two new Ajax tire branches have been opened. One is in Chicago at 1418 Michigan avenue, in charge of G. J. Durwell, formerly branch manager for the International Tire Co. The other branch is in Detroit, in charge of Charles Hatch, formerly branch manager there for the Hartford Rubber Works, and prior to that time with the Diamond Chain Co.

Ernest Kelly Dead—The death of Ernest Kelly, one of the traveling sales managers of the Dragon Automobile Co., news of which has been received from Sacramento,, Cal., is received with regret. Mr. Kelly achieved prominence last winter by piloting a Thomas car in the longest nonstop motor record ever made in this country. Shortly after he became a representative of the Dragon Co. He recently was sent to the Pacific coast, where he undertook the work of reorganizing agencies in that section. Particulars of the injury which led to Mr. Kelly's death have just been received. His remains will be brought east for interment.

Early Show in Philadelphia—Following in the footsteps of the national trade bodies, the Philadelphia Automobile Trade Association at its meeting last week decided on an early show. The date selected is the week of November 9-16, which will fill in the gap between the last New York show and the Chicago exhibition. Again the building bugaboo promises to worry the managers of the show, and as there is no building of suitable size anywhere within reasonable distance of the business center the First regiment armory will in all likelihood be decided upon. President W. H. Smith has named the following show committee to manage the details of the enterprise: George H. Smith, White; Edward Leeds, Matheson and Studebaker; E. H. Fitch, Diamond tires, and Fred Vanderhoef, Ford. J. H. Beck, who so ably looked after the thousand and one details of the last show, the most successful in the history of the local association, was again selected as secretary of the show committee.

PENNSYLVANIA, CARRYING THIRTEEN PEOPLE, CLIMBING 3-MILE HILL NEAR READING, PA.

Chief Using a Roadster—Chief Delaney, of the Denver police department, is driving a Thomas Detroit roadster which the city has bought for him. It is the same car in which Mathewson made 50 miles in 55 minutes 43 2-5 seconds.

Climbs Never Sink Mountain—The Pennsylvania roadster, carrying a full load of passengers, is reported to have climbed Never Sink mountain, near Reading, Pa., without once shifting to the low gear. The climb is 3 miles and there are many steep ascents and sharp turns, while the surface is badly cut up by washouts and covered by soft earth.

Big Gotham Garage—A new garage has been opened at 147-151 West Forty-ninth street by the B. &. H. Motor Car Co., the officers of which are Walter C. Burbank, president and general manager, and Francis C. Hoyt, secretary and treasurer. It has accommodations for 250 cars. Washstands on each floor will hold two cars each. The company has been admitted to membership in the New York Automobile Trade Association.

New Tire Coming Out—J. D. Prince, of the Traction Tread Tire Co. of New York, is to abandon the former type and bring out a new tire to be known as the Tourist. The new tire is conventional in its external appearance, but has within ten air chambers, independent of each other, and yet built in union with the balance of the tire, thus giving it at all times a positive and negative air pressure, each chamber containing about 85 pounds of air. The claims made for this tire are no punctures, blowouts, rim cutting, heating, pinching of tubes or coming off the rim, giving improved resiliency without vibration, same speed, with a very slight increase in the first cost, there are no lugs or pump and no changing of the condition of the wheel, it is claimed by the company.

Will Rebuild—The East Liberty Automobile Co. of Pittsburg, recently burned out, will shortly commence the erection of a fire-proof garage in Center avenue, east end. It will be of the most modern type and much larger than the old building.

Another Concern—The Bay State Auto Co., of Boston, calls attention to a statement made in a Boston article in Motor Age of September 12, in which it was stated that the Bay State Automobile Co. had gone under. This is denied, the Bay State people asserting it was the Back Bay Automobile Co. that encountered the financial breakers.

Will Handle the Acme—An agency for the Atlas two-cylinder runabout has been established in New York and C. H. Martin, for many years connected with the Knox company and later the head of the Martin Co., consulting engineer on commercial vehicles, has taken charge of the agency and opened headquarters at 31 West Forty-second street.

Marketing Kelsey's Device—The Acme Spring Check Co. is a new concern which has opened offices in New York, and will sell and give demonstrations of a new device for motor cars known as the Shocsorber. This is a device invented by C. W. Kelsey. It is designed to check the rebound of springs on cars without interfering with the depression of the springs. It is a single-action shock absorber which leaves the spring free to exert its entire resiliency but it is said to check the violent rebound which makes motoring uncomfortable. H. E. Randolph, formerly treasurer of the Maxwell-Briscoe Motor Car Co., is at the head of the Acme Spring Check Co., maker of the device.

THE READERS' CLEARING HOUSE

COMPETITION RECORDS

Indianapolis, Ind.—Editor Motor Age—Your issue of September 12, in the article referring to the races held at Morris park track recently, says: "The lucklessly eliminated Lozier, by the way, covered 100 miles in 2 hours 1 minute 49 seconds, a new track competition record." We desire to call your attention to the fact that on November 4, 1905, W. F. Clemens established a world's record at the Indianapolis state fair track of 100 miles in 1 hour 53 minutes 21 4/5 seconds, which record was made in competition at an open race meet, which was being held on the above mentioned date at the above mentioned track. There were some nine or ten entries in this particular race at its opening, but most of these dropped out, though some others in addition to Clemens with his National car finished the 100 miles. Therefore the record in question was a competition record, and, as we understand the matter, it never has been broken; in fact, we have no knowledge of any one of the several records made by the National cars on November 4 and also November 16-17 having been broken. We call your attention to this matter merely to correct the error in your issue of the 12th.—National Motor Vehicle Co.

IGNITION MATTERS

San Pierre, Ind.—Editor Motor Age—Will you please advise me through the Readers' Clearing House if it is possible to connect two storage batteries of 6 volts 60 ampere hours each and use them for ignition and for lighting. I wish to put on an Apple charger and desire to know if this voltage will be too high for a Splitdorf coil? If so, how can it be connected? In adjusting the tremblers on the coil does this merely vary the size of the spark? Does it have a tendency to make the spark fast or slow? I would infer that with a good timer when the timer makes a contact the spark appears at the same time. Can a Prest-O-Lite gas tank be returned and will the purchase price be refunded? I have noticed, especially in Chicago, that there is a trail of smoke from the exhaust of nearly all the motor cars. Is it necessary to use so much oil that smoke will issue from the exhaust in large quantities?—W. S.

Nothing would be gained by connecting two 6-volt 60-ampere storage batteries, for if fully charged the voltage would be too great for the coil and if run down coupling them would avail nothing. They are not like dry cells in this regard. One would better be used for ignition and the other for lighting purposes. So far as connecting an Apple charger is concerned, it will be wise to ascertain from the Dayton Electrical Mfg. Co., Dayton, O., what is necessary to do, as this concern makes the Apple charging outfit. Adjusting the tremblers of a coil does not necessarily determine the size of the spark, but it may regulate frequency. Motor Age covered the matter of coil adjustment exhaustively a few weeks ago and a perusal of this will give all the information that can be desired. Motor Age is not informed of the business policy of the Prest-O-Lite company. It is not necessary to lubricate a motor so it will exhaust smoke, but exact adjustment of an oiling system is a delicate operation. Many drivers believe it good policy to play safe and use too much rather than too little oil. When smoke issues from the exhaust it is certain the motor is being well lubricated, whereas without this guide it is sometimes impossible to know for sure that the motor is receiving the supply it requires. The chief harm resulting from too much oil is that it will foul the plugs and valves more readily and dirty the motor.

OLDFIELD QUITS RACING

Toledo, O.—Editor Motor Age—I want to quit racing and to show the public that I am sincere I want to sell my outfit, then I am ready to accept a position. I have been in the game a long time. I was the first one to start and I am the last one to quit. I have been in several bad accidents in addition to having many narrow escapes. I also have been an eyewitness to a great many terrible accidents. I never have refused to race anyone. I have lost a few races and I have won a great many. In all my races, win or lose, I have been on the square. I have made some money out of the game and I don't know of owing a dollar to any one in the world. If by chance I have overlooked any small indebtedness, I would be pleased to receive a bill and I will remit at once.—Barney Oldfield.

CORRECTION CONCERNINC STEAM

Chicago—Editor Motor Age—A slight error appears to have been made in my communication in Motor Age of last week regarding valve arrangement in steam motors; a line seems to have been dropped. What I said was: "In reading Motor Age of September 12 I notice an article by C. F. M., of Springfield, Mass., on the steam valve arrangement of the compound engine, in response to questions asked by Searcher, of Sacramento. As I am sure Searcher is still in search, I would like to help him, possibly through the medium of C. F. M. In a cross-compound engine using a piston valve in the high pressure and a common D slide valve in the low pressure, should the high pressure piston valve leak it would necessarily increase the receiver pressure above its pre-determined point, thus throwing a severe back pressure on the high pressure engine, increasing the work done by the low pressure engine and decreasing the work done by the high-pressure engine and establishing an unbalanced proposition. The steam which has leaked past the high pressure piston valve is admitted to the low pressure piston at an increased pressure, accomplishing more work than the low pressure engine is designed for. As to this being economical, the leakage of steam is accompanied by wire-drawing and higher exhaust pressure from the low pressure engine, both of which are sources of great loss and would otherwise not have occurred."—Edwin de Haven Caldwell, Webb Jay Motor Co.

SPEED AND ECONOMY

Faribault, Minn.—Editor Motor Age—Other things being equal, please advise me if any more gasoline is used or required to run a car 20 miles an hour than 10 miles an hour. This is simply a point of dynamics I have not been able to solve satisfactorily. Stated in another way, it is a question of what effect, if any, does velocity have upon the amount of force expended on a moving body.—W. M. N.

Speed has always been a factor in the matter of economy in all things, particularly in steam and electric motors. It is true also in the matter of internal explosion motors. It must be remembered, however, that there is a point where a gasoline engine pulls a certain load better than at any other point—that is, a point in speed. A gasoline motor must be operated at some certain speed in order to produce best results; under or over that point there will be a deficiency. Tests alone will prove what this point is. A car might be driven at a 20-mile rate more economically than at a 10-mile speed, but it probably could not be driven at a 60-mile speed more economically than at a 30-mile speed. These figures are used simply for the purpose of illustration and are not to be taken as meaning to be exact. It would prove interesting to W. M. N. to make a series of experiments along the lines suggested to determine results which will prove the case.

PACKARD SCHOOL

Parma, Mich.—Editor Motor Age—In your issue of June 6, 1907, you gave a description of the Packard school for chauffeurs at Detroit. I am 20 years old and wish to learn to drive and repair a motor car. Is there a way by which I could get into this school?—John Gorton.

Write the Packard Motor Car Co., Detroit, Mich., which can furnish all the details necessary.

BRIEF BUSINESS ANNOUNCEMENTS

Scranton, Pa.—The Scranton Motor Car Co. has been appointed agent for the Berliet during the coming season.

New York—The Unexcelled Garage Co. has been incorporated with a capital stock of $10,000 by L. A. Kerngood and L. F. Tobias.

New York—A petition in bankruptcy has been filed against the Metropolitan Motor Car Co., which conducts a storage and renting company at 50-56 West Forty-third street.

Boston, Mass.—Frank C. Thomas, for some time press representative of the Cadillac company and later of the Pope company, is to be the motor editor of the new Boston Tribune.

Savannah, Ga.—The Wilson Automobile Co. has succeeded to the business of Thompson & Co. in this city, and will do a general renting, storing and repair business at Bull and Jones streets.

Muncie, Ind.—Thomas F. Hart and Madison Maring have formed a partnership and will establish a motor car factory here. The new concern will devote particular attention to the manufacture of delivery wagons.

Dallas, Tex.—An agency for the Maxwell will be placed in this city in the near future. Charles G. Bleasdale, treasurer of the Maxwell-Erie Co., is now making arrangements for the opening of the new place in this city.

Rochester, N. Y.—The Jenkins Motor Car Co. has been incorporated with a capital stock of $100,000, and will manufacture and deal in motor cars and supplies, engines, boats, etc. The incorporators are J. W. Jenkins, L. H. Whitbeck and G. W. Todd, of this city.

Jacksonville, Fla.—L. C. Oliver has leased the skating rink auditorium at Ashley and Ocean streets and will remodel it into a garage. He has the agency for the Ford, and in addition to carrying a full line of supplies, will have a repair department.

Pittsburg, Pa.—Plans have been approved for the erection of a new building to be known as the Maxwell palace. This is to be the home of the local representative of the Maxwell-Briscoe Co. It is expected that the contracts will be awarded within a few days.

Muncie, Ind.—The Warner Gear Co., located in this city, is erecting a new building 154 feet square as an addition to its main plant. It will be ready for occupancy about October 1 and it is estimated it will triple the company's capacity. The plant is to be devoted to the manufacture of sliding gear transmissions and differential gears.

Philadelphia, Pa.—J. L. Gibney & Brother, are now settled in their new quarters at 211-213 North Broad street.

Davenport, Ia.—O. Jansseen has been granted the agency for the Mitchell and will erect a new building for his headquarters.

Binghamton, N. Y.—E. B. Delemater will remove from his present location on Market street to the new building now being erected on Washington street.

St. Louis, Mo.—T. H. Bailey, formerly assistant general manager of the General Electric Co., has been appointed general manager of the Kobusch Automobile Co.

Chicago—The Lake View Automobile Co. has been incorporated with a capital stock of $15,000, and will manufacture and deal in motor cars. The incorporators are F. A. Croft and C. K. Samuels.

Boston, Mass.—The Stranahan-Eldridge Co., now in the Tremont garage, expects to move into its new quarters at 823 Boylston street before the first of the month. This concern has the agency for the Buick.

Pittsburg, Pa.—The Schroeder Automobile Co. of Pittsburg will start 1908 business in a new garage, 75 by 121 feet, at South avenue and Hay street, Wilkinsburg. Its business has so far been in bicycles and motor cycles, but now it is arranging for two motor car agencies.

Portland, Me.—A. M. Speare, Jr., has resigned his position as manager for J. A. Dowling, of South Portland, Me., and will start into the motor business in Portland. He has secured the agency for a line of cars, and also has leased a salesroom on Exchange street, expecting to open by October 1. He will handle a line of supplies, but will not run a garage or repair shop.

RECENT INCORPORATIONS

Cincinnati, O.—Tool Steel, Motor Gear and Pinion Co., capital stock $100,000, to manufacture tool steel, gear wheels, motor gear wheels and pinions. It has leased a plant at Carthage, O.

Joplin, Mo.—Webb Motor Tire Apparatus Co., capital stock $500,000, of which one-half has been paid in. Incorporators: A. C. Webb, E. P. Rhodes.

Salem, O.—Salem Auto Garage Co., capital stock $10,000, to operate a garage and act as agent. Incorporators: P. G. Middleston, W. T. Webber and J. S. Doutt.

Dallas, Tex.—Western Motor Car Co., capital stock $5,000. Incorporators, D. A. Templeton, F. S. Thompson and J. B. Suegar.

Chicago—James Levy Co., capital stock $35,000, to engage in the manufacture of motor car parts and accessories. Incorporators: E. H. Garnett, G. T. Morsell and J. F. Finerty, Jr.

Philadelphia, Pa.—W. C. Middletown and R. W. Blake have been added to the sales force of the Hills Motor Car Co.

Pittsburg, Pa.—The East Liberty Automobile Co. has granted the contract for the erection of its new garage on the site of the old building.

Bay City, Mich.—Edward C. Ewen has been appointed receiver for the Smalley Motor Co. The business will be continued under the receiver.

Worcester, Mass.—George Stowe has been appointed agent for the White steamer in this city and Springfield, together with intermediate territory.

Newark, N. J.—The Green Motor Car Co. has enlarged its Montclair garage for remodeling, overhauling and repairing machines, and will handle the Peerless.

Buffalo, N. Y.—The Maxwell-Briscoe company has removed its downtown salesroom to the garage on Goodrich street. This has been remodeled and improved.

Pittsburg, Pa.—The Standard Automobile Co. has sold the building site at Aiken avenue and the Pennsylvania railroad and all plans for the erection of a new plant have been abandoned for the present.

New Orleans, La.—The Crescent City Automobile Co. has been incorporated with a capital stock of $30,000, and will manufacture, sell and repair motor cars. The incorporators are J. P. John, who is the president of the concern; D. C. Johnson, vice president, and W. P. Parkhouse, secretary-treasurer.

Philadelphia, Pa.—W. C. Middleton, formerly of the Philadelphia Rambler and Matheson-Studebaker agencies, and R. W. Blake, at one time manager of the Philadelphia branch of the Knox Automobile Co., have joined the forces of the Hills Motor Car Co., which handles the Royal Tourist in the Quaker city.

Newcastle, Pa.—Daniel Morgan, of Pittsburg, is associating with him several Newcastle, Pa., capitalists in a company which will manufacture cars in this city. The company will be known as the Newcastle Automobile Co. and will at once erect a plant to employ 200 men and which will be running by April 1, 1908, it is expected.

Lima, O.—The Majestic Automobile Co. has leased for a period of 10 years the Majestic skating rink and has converted it into a first-class garage. The building is of brick 208 by 54 feet in the clear and without a post. The Majestic company is incorporated for $10,000, paid in, and has secured the Buick and Thomas agencies. W. E. Rudy, formerly with the Thomas people in Buffalo, is manager of the business.

WINTON

SIX-CYLINDER

SIX TEEN SIX
Self Starting

SIX TEEN SIX
Self Starting

The same discernment that prompts a keenly sensible, successful man to equip his home with electric lights ought to prompt him to purchase a six-cylinder motor car.

The six is as far superior to the four as the electric light is to gas. Efficiency, safety, economy, beauty and above all else, the satisfaction of having the best there is, commend electric illumination and the six with equal force.

There isn't even a saving in first-cost to favor the purchase of a four. Best fours cost so little less than the WINTON SIX-TEEN-SIX that the initial saving cannot compensate for the difference in wear and depreciation at the season's end.

The reason: The WINTON SIX-TEEN-SIX obeys the laws governing the use of power. The penalty that fours pay for violating these laws is waste of power and a speedy wearing out of parts. That accounts for the **low second-hand prices** at which fours may be bought after one season's use.

This is avoided in the Six. The value of fours must drop still further because succeeded in the market by a later and better type, but the Six, operating at minimum expense for fuel and repairs, also operates at minimum depreciation. The supreme delight of owning the finest designed, the sweetest running and smoothest riding motor car on the market—the car for men who can command the best there is—this, and real economy will prompt your purchase of a WINTON SIX-TEEN-SIX. Goes the route "like coasting down hill." The "exclusive" car of 1908—entire output limited to 500 cars.

Luxurious appointments.	Sweet running engine.	Perfect carburetion.
Double ignition system.	Eisemann Magneto.	Mechanical lubrication.
Goes the route on top gear.	Double carburetor.	Multiple disc clutch.
Perfect shaft drive.	Winton Twin Springs.	Brakes that HOLD.
Abundant room for seven.	Remarkable flexibility.	Cylinders offset.
Single non-vibrating coil.	Mechanical valves.	Silent in operation.
Great power in reserve.	Reserve gasoline tank.	Three speeds and reverse.
Floating type rear axle.	Tires 36x4½.	Beautiful flaring guards.

Wheel base 120 inches—long enough to be elegant, not long enough to be awkward in steering. All working parts completely housed. Car delivered to you fully equipped with 5 bow top, glass front, 5 lamps that light, gas tank or generator, horn that toots, and full set of tools that are useful.

$2500 IN GOLD For Ten Good Chauffeurs

First Prize $1,000
Second $500 Third $250
Fourth $150 Six others $100
A plan to benefit owners as well as drivers. Ask us about it

The Winton Motor Carriage Co. Member A.L.A.M. **Cleveland, O., U. S. A.**

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Sales agencies in all important cities